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It's Important to Know In Time'

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The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

Production Tools for Victory

AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD ★

Technical Governmental

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'Written To Be Read on Arrival'

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Established 1926.

Inside Dope

By George F. Taubeneck

Wholesalers Will Survive
Classic Example
Herbert Metz of Graybar Speaks
Philco's Paul Jones Finds
Economy and Virility
In Present System
Cost of Any System
Is Purely Relative

Wholesalers Will Survive

WISACRES have been going around with long faces for the last two years, solemnly tolling the death knell of the wholesale distributor in the appliance field, as well as in the parts jobbing business. They say what everybody appears to agree on: that distribution costs are too high. They also resurrect that hardy perennial slogan: "the middleman must go."

That long-suffering "middleman" has been consigned to eternal oblivion by the halfway thinkers ever since the first pushcart peddler trudged out over the hills with his stock of cutlery and his bolts of cloth.

When the writer was a boy this eternal economic football was taking a beating in the debating societies and the women's clubs. The professors occasionally gave it a bat in the behind in college. And the professional uplifters, whenever they ran out of other smear material, could always dig down into the sermon barrel for the philippic on the "middleman."

Yet the wholesaler is still with us and *mighty* prosperous, thank you, and we venture to say he'll still be going strong when our grandsons are gravely listening to lectures on the evils of the poor old "middleman."

The simple fact is that the wholesale distributor more than pays his way. He performs a necessary economic function better and cheaper than any other substitute seems able to do. He more than compensates for his small percentage of "take" out of the distribution cost spread.

It always seems to shock people, though, whenever they learn the relative costs of distribution. "Overall," as they say in Washington, approximately 40 cents of the consumer's dollar goes for production, while 60% goes to the distribution system. (The major appliance business does better—it's on a 50-50 basis.)

Classic Example

The classic example of shock is always registered when the farmer orders scrambled eggs in a hotel. He may have sold eggs that morning for 24 cents a dozen. His two scrambled eggs in the hotel dining room may cost him 75 cents. And he'll never be able to get over it, or understand it, as long as he lives.

But if every time every one of us wanted scrambled eggs for breakfast we had to drive out to the farm, taking along our own frying pan and plate, the farmer probably wouldn't sell any eggs at all. No matter what eggs cost—served graciously on spotless linen in an air-conditioned, beautiful dining room by an efficient waiter—the farmer should be happy so long as it means that he can sell his eggs.

The same line of reasoning goes for electric refrigerators. In the old days if a man wanted a carryall for a pair of spanking bays, he went to a carriage maker and ordered it. In due time, he got it, at a price. How much do you think electric refrigerators would cost if that procedure were followed on their purchase?

It's the willingness of a nationwide group of wholesale distributors to take the risk of placing orders at one time for all the refrigerators they think they can sell in their respec-

(Continued on Page 10, Column 1)

Leagues Question Proposed Purpose Of Dealer Assn.

By Ross Potter

DETROIT — Arguments for and against joining the newly organized National Electrical Retailers Association provoked the most spirited of the discussions held during the ninth annual conference and election of officers of the International Association of Electrical Leagues at Detroit's Book-Cadillac hotel Sept. 20-22.

The IAEL's new slate of officers comprises E. P. Zachman of the Cincinnati Electrical Assn., president; V. W. Hartley, of Los Angeles' Pacific Coast Electrical Assn., Inc., vice president; J. W. Morrison, of the Electrical Assn. of Philadelphia, treasurer; and O. C. Small, of the National Electrical Manufacturers Assn., secretary.

Board of Directors for the coming year will be G. W. Austen, of Toronto's Electric Service League; H. F. Bennetts of the Kansas City Electrical League; J. C. Chamberlain, of San Diego's Bureau of Radio & Electrical Appliances; C. H. Christine, of the St. Louis Electrical Board of Trade; W. D. Shaler, of Pittsburgh's Electrical League of West Pa.; and H. P. Wilson, of Rock Island's Electrical Institute of the Tri Cities.

Following established tradition the Association's retiring president, W. A. Ritt, of Minneapolis' North Central Electrical Industries, will be retained as an advisory member of the Board.

The discussion of points pro and con membership in the NERA followed an outlining of the general purposes and program of the or-

(Concluded on Page 18, Column 1)

'Monitor Equipment Corp.' Formed as Distributors Group

NEW YORK CITY—Monitor Equipment Corp., headed by T. K. Quinn, has been established here as a new, national sales organization of established specialty distributors, who will sell "the most complete line of home appliances and equipment (some 30 'package' products) ever offered to the public," under a single registered brand name, "Monitor."

More than 60 independent distributors covering the country are the owner-branches of the organization, which will make its headquarters in the Bowery Bank building, 110 E. 42nd St., New York City. The heads of the associated distributor organizations are the directors of the new company.

No disclosure of the associated member distributors or supplying

(Concluded on Page 40, Column 1)

Cincinnati Utility To Quit Merchandising

CINCINNATI — Merchandising of appliances will be dropped for a three-year period after the war by the Cincinnati Gas & Electric Co., but the utility will offer free use of its entire store display space to appliance manufacturers, according to plans announced by Fred S. Dewey, general sales manager.

"If the utility's display proposal is accepted, manufacturers themselves will have to work out allocation of space, rotation, and moving of merchandise," said Mr. Dewey.

Apparently the utility feels that postwar promotion plans of dealers will be adequate, for Mr. Dewey pointed out that the utility has never

(Concluded on Page 4, Column 5)

Plans Underway For Bigger '45 Locker Conclave

'Stevens or Kansas City Auditorium' Is Cry Of Overflow Crowds

COLUMBUS, Ohio — Future conventions of the refrigerated locker storage industry will get into the "big time" status, according to plans which got underway at the annual conventions here of the National Frozen Food Locker Association, and the Frozen Food Locker Manufacturers and Suppliers Association.

The attendance of more than 1,000 interested persons, and the exhibits of 63 companies overflowed the facilities of the Deshler-Wallick hotel, and it was obvious that no hotel in the country without special facilities could handle future conventions of the locker plant industry, if the field continues to grow, or even if it only holds its own.

Indications were that the Frozen Food Locker Manufacturers and Suppliers Association would take a part in the management of the exhibits, which in the past has been exclusively managed by the National Frozen Food Lockers Association (which is the organization of locker plant operators).

As reported in the Oct. 2 Bulletin edition of the NEWS, applications on hand for some 250 new refrigerated locker storage plants or expansion of existing plants, which have met the criteria of necessity established by the War Food Administration, are now in the process of being okayed, and more new applications may be approved this fall. However—

No applicant may accept delivery of refrigeration equipment for such locker plants for approved plants before Jan. 1, 1945. This holds true even if the local refrigeration dealer has the equipment in stock.

Rumor has it that this latter restriction may be removed very shortly.

The two associations have worked very closely, and it is probable that they will work more closely than ever if there are to be plans for an expansion of the convention.

"There are only two places this convention should be held next year—the Stevens hotel in Chicago, or the Municipal Auditorium in Kansas City," declared one of the most influential members of the Manufacturers and Suppliers group.

Some of the thinking for the future plans for the convention and exhibition embraces the idea of including the home freezer industry as a special part of the convention, and possibly also the commercial quick-frozen foods industry.

Attendance of manufacturers, dealers and other elements from the

(Concluded on Page 4, Column 4)

Steinhorst Gets Okay Under 'Spot Procedure'

UTICA, N. Y.—Emil Steinhorst & Sons, Inc., here may possibly lay claim to being the first manufacturer of refrigeration equipment to be granted authorization to manufacture civilian goods by the "spot procedure" authorization possible under Priorities Regulation 25.

The "Z" symbol priorities permitted under the authorization will be used to get materials and components for the manufacture of milk coolers above and beyond the quota given the company under the farm machinery order, it was said.

I.C.I. To Map Drive For Selling Public on Comfort Control

By C. Dale Mericle

DETROIT—"This is a billion-dollar industry that has come of age" was the keynote struck by P. B. Zimmerman, president of the Indoor Climate Institute, to open the group's first two-day forum held at the Book-Cadillac hotel here recently.

Some 300 representatives from the heating and air conditioning industries, and related fields were given a rapid-fire presentation of the aims and possibilities of the institute through talks, slides, and seminars.

All officers of the institute were re-elected. They are: Paul B. Zimmerman of Airtemp Division, president; T. A. Crawford of Timken Silent Automatic Division, first vice president; L. M. Hunter of National Radiator Co., second vice president; R. E. Moore of Bell & Gossett Co., secretary; and E. N. McDonnell of McDonnell & Miller, treasurer.

Two members were added to the board of directors: Lyle C. Harvey of the Bryant Heater Co. and J. P. McIlhenny of General Electric Co.'s Air Conditioning and Commercial Refrigeration Division.

Defining the term "controlled indoor climate" as the "fourth dimension in living," Mr. Zimmerman described the present status of this development and outlined its future.

"We have good proven products, but to date we've had very limited sales," he declared. "And this is due chiefly to the lack of interest on the part of the home builders and the public. Builders have not been using air conditioning as a sales feature in the selling of new homes. And, further, manufacturers weren't reaching the builders with their story.

"I think, however, that this industry will follow the usual pattern of

(Continued on Page 12, Column 1)

Industry Items High On Krug's List of 'First To Be Made'

WASHINGTON, D. C. — Acting Chairman J. A. Krug of WPB has requested the industry divisions to make recommendations concerning those plants which should be freed from military production first in order to facilitate the production of important peacetime products at the earliest possible time following X-Day.

The request was disclosed in an operating instruction issued by H. C. Batcheller, operations vice chairman.

The list of products selected for earliest production is the following:

Air conditioning equipment, automobiles, commercial cooking equipment, commercial refrigerators, electric fans, electric ranges, integral buses, laundry machinery, light trucks, mining machinery, office machinery, oil burners, radios, railroad cars (passenger), refrigerators, sewing machines, stokers, street cars,

(Concluded on Page 4, Column 4)

Askin Joins Peerless As Design Engineer

MARION, Ind.—Joe Askin, formerly chief engineer of Fedders Mfg. Co., Buffalo, for the past 21 years, has joined Peerless of America, Inc., of Marion, Ind.

With his staff of engineers he is now in the process of redesigning Peerless products and is working 100% on post-war plans.

He is a graduate of the University of Michigan, in engineering. He was

(Concluded on Page 4, Column 3)

WPB Continues Restrictions on 'Freon-12' Gas

Official Statement Does Not Say How Long They Will Continue

WASHINGTON, D. C. — Restrictions on the delivery of "Freon-12" which would have expired Sept. 30, were renewed by an amendment to Order M-28 issued Sept. 27 by WPB.

"It had been expected that the use of substitutes in refrigerants and restrictions on the use of 'Freon-12' in air conditioning would be discontinued on Sept. 30, but an unexpected shortage of anhydrous hydrofluoric acid, a component of 'Freon-12,' has made this impossible," WPB officials stated.

"New 'Freon' facilities had been completed that were capable of producing, together with existing facilities, a total of approximately 5½ million pounds of 'Freon' per month. This amount of production would have been sufficient to meet all known military and civilian requirements during the fourth quarter of 1944.

"The shortage of anhydrous hydrofluoric acid that has developed, however, makes it necessary to operate the 'Freon' facilities at less than 70% of capacity and necessitates extending the date on which restrictions can be lifted. Anhydrous hydrofluoric acid, besides being used in the production of 'Freon,' is also required in the manufacture of high octane gasoline and for direct military use."

The restrictive provisions of the order are the same as previous, with deliveries permitted as follows (quoting from the order):

(2) No person (including users, dealers, and other suppliers, and producers), shall deliver, or accept delivery of, any "F-12" gas for use in, or for resale for use in any new or used system of any type (not in List A) unless the system must be oper-

(Concluded on Page 40, Column 2)

Chaffer To Head G-E Household Sales

BRIDGEPORT, Conn. — General Electric has announced that A. G. Chaffer has been appointed sales manager of its household refrigerator division with headquarters in this city.

Mr. Chaffer's career with the company has been extensive, including selling with the General Electric Supply Corp. and as sales manager for the home laundry equipment division in Bridgeport. During the present war years he was supervisor of appliance service centers with headquarters in Bridgeport. Prior to his new appointment he was assistant manager of General Electric's South Lowell Works where the deadly "flying bazookas" are manufactured.

During the first World War he was in the field artillery and served with the 57th regiment in France. After the last war he joined the General Electric Supply Corp. as a salesman in Chicago and Newark.

In 1930 he joined the appliance and merchandise department as Cleveland representative. Subsequent positions took him to Pittsburgh as district manager of the department and finally to his sales managership in Bridgeport.

The announcement of Mr. Chaffer's appointment was made by L. H. Miller, new manager of the household refrigerator division. Mr. Miller has been refrigerator sales manager since 1937.

Handling Development Work for Kerotest



AUSTIN JONES

A veteran of many years in the refrigeration parts business, Mr. Jones is now in charge of research and development for Kerotest Mfg. Co. He is widely known in the industry for his hobby of photography, and many of his pictures have been in the News.

Warren Gets Delco Post

ROCHESTER, N. Y.—Julian Warren has been appointed manager of advertising and sales promotion of Delco Appliance Division, General Motors Corp.

Ask Removal of All Restrictions On Enamel Ware

WASHINGTON, D. C. — Removal of size restrictions on cooking, household, and hospital enameled ware utensils in preparation for the resumption of peacetime production was recommended by the Porcelain Enameled Utensil Industry Advisory Committee at its recent meeting with the War Production Board.

The committee also requested that additional steel be made available for use in the production of enameled ware for civilians in the fourth quarter, to prevent unemployment if military orders are cut back.

Relaxation of the enameled ware order, L-30-b, the committee explained, would enable the industry to use materials, manpower, and facilities with maximum efficiency by permitting rapid shifts from one production line to another.

Revocation of L-30-b on X-Day, as proposed within WPB, was approved by the committee.

WPB representatives said the steel sheet situation is expected to improve in the first quarter of 1945, especially if Germany is defeated before that time and if military orders are cut back. Production of both hot and cold rolled sheets will increase if labor shortages do not interfere, WPB officials said.

They added that enameled ware manufacturers should experience little difficulty in placing fourth quarter steel allotments.

To Direct Work With Bendix Field Forces



W. F. LINVILLE

* * *

SOUTH BEND, Ind.—W. F. Linville, since 1940 southwestern divisional sales manager for Bendix Home Appliances, Inc., has been appointed director of divisions in charge of divisions and districts, including distributor and dealer operations, announce J. S. Sayre, president.

He joined Bendix Home Appliances as personnel director when the company was started in 1927. In 1938 he was given a district territory, and in 1940 was named southwest divisional sales manager.

Blood Says Norge Postwar Employment Will Be 50% Over Best Previous Year

DETROIT—Total postwar employment in all plants of the Norge division of Borg-Warner Corp. will exceed that of the best peacetime year by 50% on the basis of present plans which call for the expenditure of "very substantial sums" for expansion of production facilities, Howard E. Blood, president, disclosed here last week following a week-long postwar planning conference in Muskegon, Mich., with Norge officials and parent company directors.

Norge is prepared to go into limited production of consumer goods even before conclusion of its present war contracts, provided the appropriate government agencies cooperate in making labor and materials available as war needs decline, he stated.

"This program," Mr. Blood continued, "would permit us to increase consumer goods output in somewhat the same ratio as war production is curtailed and would, at the same time, minimize the employment gap incident to reconversion, speed the increase in new employment and be of inestimable aid in placing returning veterans in permanent jobs best suited to them."

Mr. Blood also stated that the company has mapped out a program which will cut to a very minimum potential unemployment in the reconversion period and accelerate new employment.

The expansion plans, he pointed out, were made in anticipation of keen competition in the household appliance field "despite expected strong demand." However, they were also made "in confidence that the spirit of high individual productivity which has been responsible for traditional high living standards of the United States, will be restored."

Pointing out that the company has experienced a 40% increase in plant capacity since the start of the war, Mr. Blood stated that present plans also contemplate the continuation of operations in a Muskegon plant which was acquired at the start of the war for the production of Oerlikon gun mounts. Motor-compressor refrigeration units will be manufactured in this factory postwar. The firm is now in limited production of standard prewar gas ranges which are available to those with Office of Price Administration certificates of

CMP-5 Change Eases Restrictions on Material For Installing & Relocating

WASHINGTON, D. C.—Easing of restrictions on the purchase of material for installation or relocating of machinery or equipment has been announced by the War Production Board, which has issued Direction 15 to CMP Regulation 5.

"Any person who has obtained machinery or equipment for use in a business listed on Schedule A of CMP Regulation 5 may use the MRO symbol and rating assigned him for maintenance, repair, and operating supplies by the regulation to get materials to install or relocate equipment under the following conditions," states the directive:

"Where construction (as defined in Order L-41) is involved, he may get materials needed for the installation or reolcation of machinery or equipment which Direction 2 of L-41 permits him to install or relocate without getting an authorization under that order," or

"Where construction is not involved, he may get up to $500 worth of materials needed to install any piece of machinery or equipment.

"Any person who has obtained machinery or equipment for use in a business which is not listed on Schedule A of CMP Regulation 5 may use the MRO symbol and a preference rating of AA-5 to get up to $500 worth of materials needed to install or relocate any piece of machinery or equipment which Direction 2 to L-41 permits him to install or relocate without getting an authorization under that order or in any case where construction (as defined in L-41) is not involved."

Money spent for materials under this directive need not be charged against the individual's MRO quota, if the machinery or equipment was acquired without use of the MRO rating. Cost of the machinery and equipment installed or relocated may exceed $500, excepting where it was obtained with the MRO rating, in which case the cost of the machinery and material combined must not exceed $500 and the combined cost must be charged against the MRO quota, according to the WPB directive.

Mackey Is Manager of Wesco In Southwest

DALLAS, Tex.—C. M. Mackey has been named manager of southwest district of Westinghouse Electric Supply Co., with headquarters here, announces D. M. Salsbury, general manager.

Mr. Mackey, who managed the Westinghouse branch in Houston, Tex., for several years, originally joined the company in 1917 as a member of the graduate student course. In 1931 he became manager of the Tulsa, Okla., office, and two years later was transferred to the Oklahoma City office in the same capacity. He took over the Houston branch in 1936.

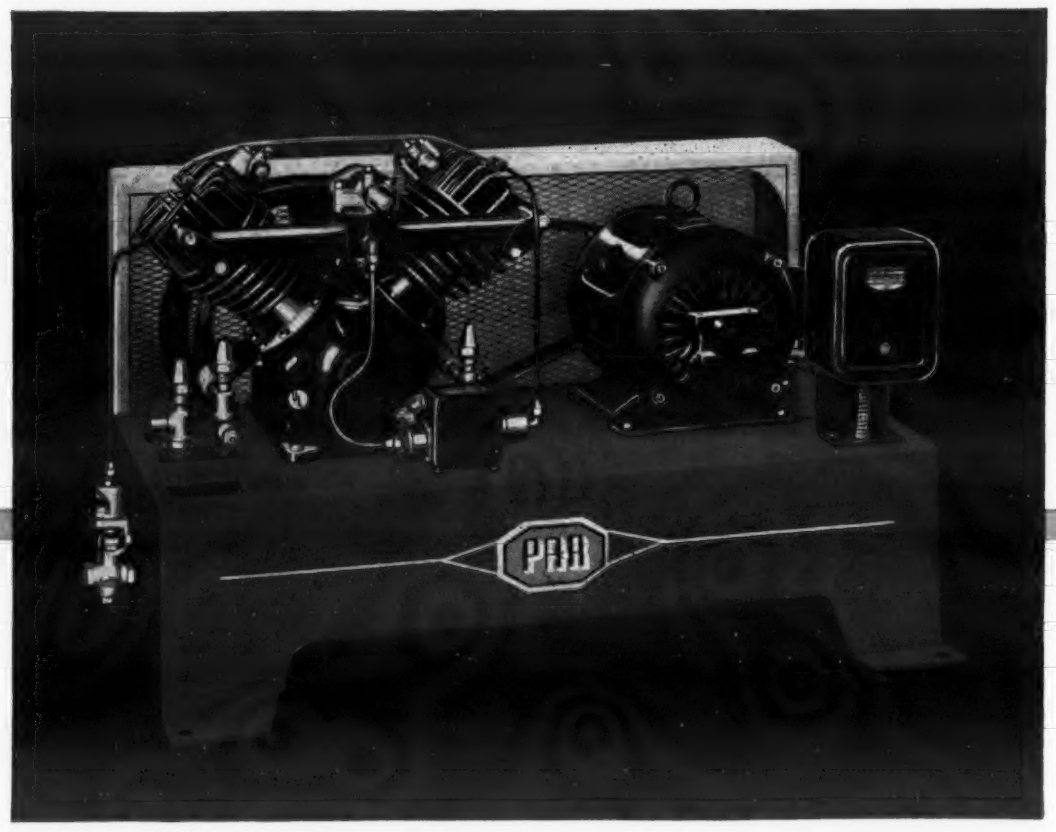
Mr. Mackey is a graduate of the University of Oklahoma.

Admiral Names Morton As Design Engineer

CHICAGO—Evans T. Morton has been appointed design engineer of Admiral Corp.'s Refrigeration Division, announces Lee H. D. Baker, vice president in charge of the Appliance Division. Mr. Morton had directed laboratory development on major appliances for Stewart-Warner Corp. and was previously laboratory engineer on refrigeration for Norge.

Davis Refrigeration Co. Opens

LOS ANGELES—Davis Refrigeration is the firm name under which William Clement Davis and Swift B. Davis are conducting business at 8940 Santa Monica Blvd., Los Angeles.



Par Model HW-50

- A brute for heavy work on locker plant, ice cream plant and super market installations.
- 5 H.P. 4 cylinder water cooled unit with fast pull down and high capacity.
- For economical operation this large capacity, slow speed unit can't be beat.

- *Write for illustrated brochure of details.*
- *BY COMPARISON—YOU'LL BUY PAR.*

PAR Division

LYNCH MANUFACTURING CORPORATION
Defiance, Ohio, U.S.A.

WHEN PEACE COMES

KOCH

WILL AGAIN PRODUCE COMMERCIAL REFRIGERATOR EQUIPMENT FOR CIVILIAN USE

NOW SOME SELF-CONTAINED REACH-IN REFRIGERATORS ARE AVAILABLE FOR THOSE WHO CAN QUALIFY . . . . . .

Write — Wire — Phone

KOCH REFRIGERATORS
NORTH KANSAS CITY . . . MO.

On the way—

A NEW KELVINATOR ELECTRIC RANGE!



Another Answer to—WHAT'S AHEAD FOR KELVINATOR RETAILERS?

Kelvinator's postwar Electric Range Program, already far advanced, will utilize to the fullest the sound "retail-minded" strategy that was the pattern for the tremendous sales gains of Kelvinator in the two years preceding Pearl Harbor.

Built specifically to crack open the vast range market . . . this aggressive program with its competitive prices and product, and a dramatic new sales story that simplifies the retailer's selling problem, is destined to capture a dominant place in the electric range field for Kelvinator retailers.

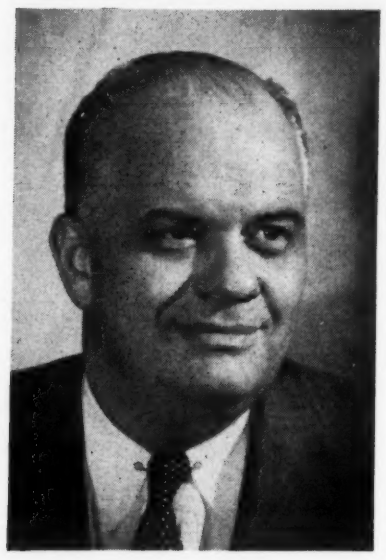
Here, then, is another and fundamental part of the franchise Kelvinator retailers possess and with which they can build a sound, highly-profitable, long-term business future. It is another reason why we say . . . the Kelvinator retailer—with Kelvinator's great postwar line of Electric Ranges, Electric Water Heaters, Refrigerators and Home Freezers—will hold the most valuable franchise in the industry.

LOOK AHEAD WITH N-K KELVINATOR

DIVISION OF NASH-KELVINATOR CORPORATION

Kenosha • Milwaukee • DETROIT • Grand Rapids • Lansing

N.Y. Bendix Manager



LYNN EATON

Has been appointed New York divisional sales manager of Bendix Home Apliances.

McGarry-Greger Moves To New Phila. Offices

PHILADELPHIA — McGarrey-Greger, refrigeration contractor, has moved to new offices and showrooms at 2524 N. Broad St. here. In addition to its present products, the firm plans to distribute the Fleetwood Craftsmen line of refrigeration equipment, and household refrigerators, home freezers, package air conditioners, etc.

Deepfreeze Expects Sales of 150,000

NORTH CHICAGO, Ill. — During the first postwar unlimited production year, sales of more than 150,000 Deepfreeze units were promised by Deepfreeze distributors of the nation who attended a Deepfreeze sales convention recently conducted at Nipperzink Lodge, Genoa City, Wis.

A three-day meeting of officials of the Deepfreeze Division of Motor Products Corp. and the Deepfreeze national distributor organization, the conference was highlighted by a discussion of the advertising, sales, and merchandising plans for the postwar promotion of Deepfreeze units for domestic use.

Willard Morrison, inventor of the Deepfreeze design, unveiled several streamlined postwar models. Supplementary informative remarks were also heard from J. B. Replogle, chief engineer, and L. E. Jacques, production superintendent.

Howard Roberts, sales manager, gave a presentation of the postwar merchandising program. During this session, copies of the new Deepfreeze distributor-dealer sales presentation were given to all distributors in the audience.

Walter Seiler, president of the Cramer-Krasselt Co., advertising agency, delivered an informal talk on the reasons why behind the Deepfreeze advertising program. After Mr. Seiler's talk, Mr. Lynn Werner, advertising manager, enlarged upon the postwar advertising aid which will be available to the sales organization.

Now With Peerless



JOE ASKIN

* * *

(Concluded from Page 1, Column 3)

assistant experimental engineer with Edison Electric Appliance Co. of Chicago and later was assistant experimental engineer with Harrison Radiator Division of General Motors Corp.

Mr. Askin has had about 35 patents granted on heat transfer surface, refrigeration apparatus, and air conditioning equipment. Since 1928 he taught refrigeration and air conditioning to the night school classes at Senaca Vocational High School, Buffalo, N. Y.

From 1940 to 1941, he was consulting engineer for Standard Aircraft Products Co., Dayton.

Industry Products on Krug's 'First' List

(Concluded from Page 1, Column 4)

telephones, typewritters, vacuum cleaners, washing machines, and water heaters.

Industry divisions are also requested in their recommendations concerning the end product plants to be freed to check carefully the material and component suppliers to the industry for any possible bottlenecks.

All recommendations will be checked against military cutback data now available to WPB and where appropriate that check will be submitted to the military procurement agencies as a guide in their cutback proposals.

It is pointed out that many plants may efficiently undertake civilian production at the same time they are carrying out military contracts. Industry divisions are instructed that it may be found appropriate to recommend the freeing of such plants from military contracts before the time this would occur with special consideration.

Locker Industry To Plan Bigger Show

(Concluded from Page 1, Column 3)

mechanical refrigeration industry at the Columbus convention was on a surprising scale. However, another surprise was the almost complete lack of representation from the commercial quick-frozen foods industry, either in exhibits or in attendance.

Among the companies exhibiting who have connections in the refrigeration field were the following:

All-Steel-Equip. Co., Amana Society, Baker Ice Machine Co., Carrier Corp., Chase Industrial Refrigerator Equipment & Engineering Co., W. B. Connor Engineering Corp., The Cooleator Co., Deepfreeze Distributing Corp., Dole Refrigerating Co., Frigidaire, General Electric Co., Kold-Hold Mfg. Co., Master Mfg. Corp., C. F. Mohr Associates, Owens-Corning Fiberglas Corp., The Pacific Lumber Co., Refrigeration Corp. of America, Safe-Way Food Locker Co., The C. Schmidt Co., The Stangard-Dickerson Corp., Universal Cooler Corp., Wood Conversion Co., York Corp.

Schroeder Named Asst. Factory Head at McCray

KENDALLVILLE, Ind. — Norbert Schroeder has been appointed assistant factory manager in charge of all factory operating departments of the McCray Refrigerator Co. here, announces V. C. Knight, chief engineer and factory manager.

To Direct Sales



A. G. CHAFFER

Recently appointed manager of household refrigerator sales for General Electric Co.

Cincinnati Utility To End Appliance Sales

(Concluded from Page 1, Column 2)

been interested in merchandising anything except gas and electricity. But because some appliances weren't pushed, or perhaps even carried by many retailers, the utility in the past has been forced into merchandising to build up its load.

He cited the promotion and merchandising efforts of the utility with the electric flatiron years ago, when the average retailer did not sell the item. Utility exploitation of the electric iron through advertising and instruction of the public aroused interest of the consumers and ultimately led to increased use of electricity, the utility's chief product, pointed out Mr. Dewey.

RCA Appoints New Firm Hartford Distributor

HARTFORD, Conn. — Radio & Appliance Distributors, Inc., established here by Louis R. Roth in July of this year, has been appointed RCA-Victor distributor for Connecticut and western Massachusetts. Associated with Mr. Roth are J. Cameron Gordon, sales manager of the record department, and Walter L. Lynch, office and credit manager.

Mr. Roth has been in the radio, electronic, and record industry since 1924. For the 10 years preceding formation of his own company, he was with RCA-Victor in various sales and executive capacities.

RUGGED—VERSATILE MACHINES...



BOTH All-Purpose Engineered

Every day the amazing bulldozer adds to its record of jobs "well done" on the Tokyo-Berlin drive. Whether it's cutting a jungle path, laying an air-strip, or "flushing" enemy snipers, it continually proves its rugged, all-purpose engineered versatility under the most adverse conditions.

Universal Cooler's new post-victory hermetics and open-type units likewise are *All Purpose Engineered*. Compact, perfectly balanced, with new and advanced mechanical features, these units are designed to fill the gap in your tomorrow's requirements. That's why leading fixture manufacturers, faced with post-victory refrigeration system problems, say:

Buy "Let's ~~Ask~~ Universal Cooler"

BUY WAR BONDS . . . AND KEEP THE BONDS YOU BUY!

UNIVERSAL COOLER

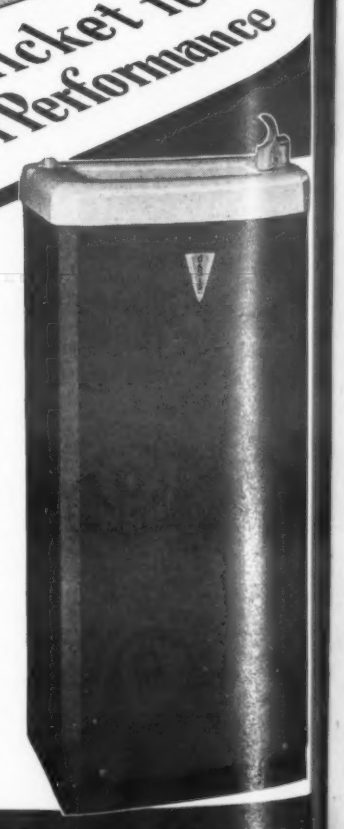
WE SELL TO MANUFACTURERS ONLY

UNIVERSAL COOLER CORPORATION • Automatic Refrigeration since 1922

MARION, OHIO • BRANTFORD, ONTARIO

OASIS Electric Water Coolers

Your Ticket for Better Performance



OASIS Electric Water Coolers put you "right up in front" when it comes to performance! They're made by people who *pioneered* in the electric water cooler field . . . built in one of the most fully equipped production-line plants of its kind in the country. You can always bank on Oasis Coolers to be ready instantly, 24 hours every day, with fresh, sanitary drinking water cooled to the most satisfactory temperature, and delivered "splash-free" at the most easily "drinkable" flow skilled engineering can devise. For the best in thirst-relief — for the most in low-cost, continuous performance—be sure they're OASIS Electric Water Coolers!

EBCO MANUFACTURING COMPANY
401 W. Town St., Columbus 8, Ohio



In a single month...more than 1000 applications for the Frigidaire Franchise!

WE deeply appreciate the many thousands of requests being received for the Frigidaire Franchise. Our only regret is that we are able to grant franchises to so few of the many fine established dealers and other businessmen who have applied—the kind of people with whom we would be proud to be associated.

However, the very reason why we are able to accept such a small number of these applications is one of the most important reasons why a Frigidaire Franchise is so desirable. For Frigidaire believes that the soundest policy is to have in each market or community the right number of quality dealers to obtain Frigidaire's proper share of available volume—and at the same time provide a profitable potential for each Frigidaire dealer.

There are many other factors that make the Frigidaire Franchise so desirable. To name only a few—

1 The value of the Frigidaire name and the reputation of Frigidaire products mean easier selling.

2 The more than *seven million* Frigidaires built and sold provide Frigidaire Dealers with an unequalled backlog of goodwill and user-to-prospect selling help. (Surveys show advice of friends and relatives to be the most valuable single source of sales.)

3 The service record of the Frigidaire organization is outstanding in its field: Frigidaire's wartime service program has built boundless goodwill.

4 Frigidaire's wartime advertising program has made partners of Frigidaire Dealers in providing users of all makes of refrigerators with helpful information. Customer goodwill has been heightened, acceptance for Frigidaire maintained and strengthened—providing an even greater competitive advantage for Frigidaire Dealers.

5 The Frigidaire business is the primary interest of all Frigidaire Distributing Organizations; thus they are in a position to give really effective aid in meeting sales problems.

6 Frigidaire has established an enviable record for giving Frigidaire Dealers sales-getting merchandising and selling programs.

7 Frigidaire Customer and Product Research guarantees that Frigidaire products will be more salable, because they will continue to incorporate "*more* of what people want and *less* of what they don't want."

8 Frigidaire Sales Training programs now in preparation assure that when "selling times" return, Frigidaire Dealers and their salesmen will be in a position to make the most of them.

9 Frigidaire is noted for the quality and the quantity of help provided dealers on all phases of their Frigidaire business.

10 Through the years, Frigidaire has demonstrated its willingness and ability to meet changing conditions—to handle new situations quickly and effectively as they arise.

The importance of all these factors has been demonstrated through years of experience. Their soundness is proved by the fact that the dealer organization built upon them has long been the strongest in the industry!

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GENERAL MOTORS SYMPHONY OF THE AIR
Every Sunday Afternoon, NBC Network

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For Excellence ARMY E NAVY *in War Production*

FRIGIDAIRE
Division of
GENERAL MOTORS
DAYTON 1, OHIO • LEASIDE 12, ONTARIO
Peacetime builders of
ELECTRIC REFRIGERATORS • RANGES • WATER HEATERS
HOME FREEZERS • ICE CREAM CABINETS
COMMERCIAL REFRIGERATION • AIR CONDITIONERS
BEVERAGE, MILK, AND WATER COOLERS

Electric Range Design To 'Take Up Where It Left Off' With New Factors Booming Sales

Conklin Sees All-Electric Kitchens Being 'Displayed Price-Tagged & Sold' From Dealer's Showroom Floor

CHICAGO — Despite widespread publicity for designers' dream supermodern electric kitchens in which 40-second meals are cooked by electronics, American homemakers will want a kitchen reflecting "evolutionary" changes — equipment that is "conventional"—not a complete break with the past, according to H. D. Conklin, manager, range and water heater sales division, Edison General Electric (Hotpoint) Appliance Co.

For example: homemakers do not want an electric range with the oven separated from the surface burners for use in different parts of the kitchen, as suggested by one designer. "Comfort, flexibility, time-saving" sum up favored design among home economics directors to whom Hotpoint recently sent an "opinion" questionaire.

"A design that is conventional to many designers is very often 'revolutionary' to homemakers. The new electric ranges, while representing the results of many years of refinements and advances, will not differ greatly from those sold in 1941 when war production replaced range manufacture," said Mr. Conklin.

He added that the electric range industry sold more than a million units in the two years preceding the war, which represented a "user" increase of 50% over all previous electric range sales made over a 30-year period. In 1941, the last year for which we have complete figures, more than 760,000 electric ranges were sold. Linking the opinions of home economists on design with the prewar sales figures, Mr. Conklin predicted:

UNIVERSAL AS LIGHTING?

"The electric range will take up in postwar where it left off, with models which will bring new ease, comfort, and beauty to homes; they will become standard equipment in new homes and remodeled homes as part of the all-electric kitchen, and sales shall continue at a rate during the next 10 years which will make electric cooking as universal as electric lighting is today."

Single unit sales of ranges and refrigerators will outsell "complete package" kitchens immediately after the war, but complete kitchens of matched "branded" appliances, from steel cabinets and electric sinks to dishwashers and garbage disposalls, will be on display at department, furniture, hardware, and specialty appliance stores, he said, adding, "any question concerning the profit possibilities of electrical appliances in department and furniture stores will quickly vanish when these appliances are shown in demonstration rooms which permit the prospect to operate the appliance.

KITCHEN IS THE CLUE

"Thousands of women will order 'installations' similar to those displayed in showrooms, others will ask for single appliances. The single appliance sales will become part of a 'complete kitchen,' purchased and installed by units.

"The time will soon come when merchants will sell most appliances as parts of a 'complete package,'" said Mr. Conklin. "The beauty and utility of electric kitchens is even now generally recognized by the consumer, and the demand has waited many years for the same recognition from appliance merchandisers.

"During the years following the introduction of the first 'package' kitchen in 1932, utilities and a few department and furniture stores used these 'room displays' principally to promote the sale of individual appliances. Interest was great in complete kitchen installations, but few companies were ready to organize departments for their installation and financing.

Too For Advanced For The Postwar Home?



The cooking sections of postwar kitchens will be modern, but not quite as fancy as this Libby-Owens-Ford "Kitchen of Tomorrow," declares H. D. Conklin, manager of range sales for Hotpoint, basing his contention on consumer surveys made by his company. In the accompanying story he prophesies that electric kitchens will be displayed and sold much like single appliances were before the war.

"Now we are ready to show merchants that there is a market for complete kitchens if they are ready to take advantage of it. Postwar will see thousands of appliance dealers showing these complete electric kitchens with prices plainly marked for installation, including floor covering and other equipment necessary to make comfortable woman's workroom."

In explaining the sharp increase in sales of electric ranges immediately prior to the war, Mr. Conklin cited the following table of electric rate history for 10 years:

Year	Domestic Meters	Meters With Rate Available*	% to Total
1931	20,150,347	8,000,000	39
1934	20,135,309	11,000,000	55
1936	21,310,197	14,275,000	67
1938	22,709,487	18,200,000	90
1941	25,474,412	24,200,000	95

*A cooking rate of three cents or less per KWH is considered favorable. The national average for domestic meters is 2.2 KWH.

WHAT RATE CHANGE MEANS

"An important point about this rate change is: there is no other electrical appliance that has the greatly increased market potential that awaits the sale of the electric range," he said. "Much has been made of certain glamor appliances, such as television, but the electric range, already a favorite in millions of homes because of past performance, will spearhead appliance sales which include all the equipment for electric kitchens.

"While one of the considerations for installing 'package' kitchen displays will be as a show-piece for individual range and refrigerator sales, these sales will in turn lead to complete kitchen sales for dealers who are prepared to handle them.

"We must all bear in mind that the dealer who talks and shows complete kitchens, with the electric range as his center of interest, will build a sound and profitable business diate sales boom that may follow the for the years that follow any immewar; and, at the same time, he will become a leader in the sale of ranges, refrigerators, and other items.

NEW PROMOTION CHANCES

"Past sales history shows that centrally located outlets for appliances such as department, furniture, and hardware stores, have made profit from the sale of appliances in proportion to the advertising and sales effort put into them," Mr. Conklin said, adding:

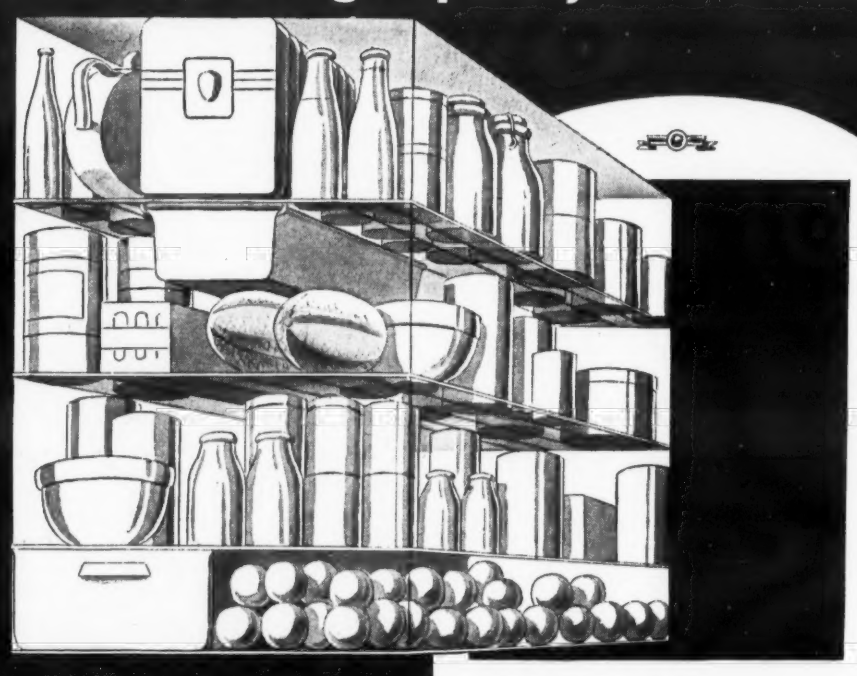
"The greatly increased display possibilities of all-electric units—including the chance for the customer to operate the appliances on the showroom floor, as well as to see them demonstrated in 'home' surroundings offered new merchandising opportunities to these types of merchants."

"We plan to assist with the installation of complete 'package' displays of kitchen equipment in leading stores across the nation because these stores will become experts in the sale and installation of appliances in 'complete room' groups.

"Dealers will find many factors favorable to electric range sales in postwar which have resulted from wartime conditions," Mr. Conklin asserted, citing that 7,000,000 women who had been employed in industry during the war would have a greater appreciation of the completely automatic control features, as well as 'clock-measured' heat of the electric range. "These women will be much more aware of mechanical functions than previously, and they will understand the value of controlled heat.

"In addition to complete kitchens to aid dealers in sales of 'packages' or single appliances, adequate wiring promotion will hold a more important place in postwar sales plans," Mr. Conklin said, explaining that a great number of America's homes are not adequately wired at present for many of the new appliances. "The entire electrical industry is planning to attack this problem nationally; and utility companies and wiring contractors will foster campaigns."

If it's cold storage space you're selling . . .



plan to insulate with SANTOCEL!

What more powerful selling point could you make to your postwar prospects than this: our unit holds more—*yet it takes up no more space!*

Whether you will be selling merchandising cabinets to the retail store, refrigerators to the housewife, or refrigerated trucks to a wholesaler . . . you should be able to offer that strong, basic reason-to-buy, if you insulate with Santocel.

Santocel has a lower heat conductivity than any other porous insulation known — even lower than the theoretical ideal of "still" air.

In fact, it is so much more efficient that the wall thickness of a home refrigerator insulated with Santocel could be cut to half that of the average prewar refrigerator, adding as much as 3.0 cubic feet of storage space to a 6.5 cubic foot unit. Similar space savings could be made in virtually any product designed to provide cold storage space.

Secret of Santocel's unprecedented insulating efficiency is its unique cellular structure. Actually, it is 90% air, trapped in spaces about one-millionth of an inch in diameter by walls one ten-millionth of an inch thick. As a result, the molecules of air travel with the same rapidity as in "free air," but the *distance* they travel between collisions is much shorter—and the heat they conduct is much less.

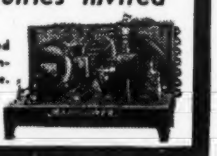
For full details, samples and technical help in adapting Santocel to your particular war or postwar heat insulating problems, write: MONSANTO CHEMICAL COMPANY, Merrimac Division, Everett Station, Boston 49, Massachusetts.

MONSANTO CHEMICALS
SERVING INDUSTRY...WHICH SERVES MANKIND

QUICK FACTS ON SANTOCEL

1. **What is Santocel:** Santocel is a new form of silica known technically as silica aerogel.
2. **Insulating value:** The thermal conductivity of Santocel is lower than that of any other material or methods of insulation employed except a highly evacuated, silvered-surface space.
3. **Density:** Although low for a free flowing powder, Santocel's density is about equal to that of other loose fill insulators and is higher than some bat types and the foil types.
4. **Application:** Santocel can be applied by building a retaining jacket about the object to be insulated, usually of lightweight sheet metal, and filling the intervening space. Being free flowing, it can be easily applied to such a construction.
5. **Settling:** Santocel settles to a stable density about as rapidly as other fill types.
6. **Moisture sorption:** Like all commonly used insulators, Santocel will not pick up significant quantities of water from the air. Practical tests have also shown that, when Santocel is applied to objects substantially below room temperature, no significant amounts of water accumulate through condensation.
7. **Safety:** Although Santocel is a silica, to the best of Monsanto's knowledge, based on unpublished work by the U.S. Public Health Department, it is not silicotic because of its highly unique structure. A mask is recommended for the comfort of handlers, however, since it is a light powder and therefore dusty.

GENUINE MAYFLOWER
CONDENSING UNITS AND PARTS
Jobber Inquiries Invited
A complete line backed by nearly a quarter century of user confidence. Write for prices.



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THE BATTLE PROVEN Electric WATER COOLERS
● THE PROVING GROUNDS OF WAR offer dramatic confirmation of the ability of Cordley Electric Water Coolers to withstand hard knocks. Supplied since 1942 for shipboard use to the Navy (Contract NXs 9982) and to the Maritime Commission. These same Battle-Proven Coolers are now available for essential uses on land. Write for facts.



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Commercial and Domestic
REFRIGERATOR HARDWARE
NATIONAL LOCK COMPANY
ROCKFORD, ILLINOIS

NORGE Offers You the PROFITS and EXTRA SALES of a Complete Line of Major Home Appliances

EVERY SUCCESSFUL DEALER KNOWS—

One outstanding appliance will sell others of the same brand. A family pleased with a Norge Rollator refrigerator is a ready prospect for a Norge range. It's basic appliance selling!

And that's why Norge dealers will enjoy *profits* from *extra sales.* Norge will give them a *complete* line of brilliant major home appliances under one famous name. And in addition to the quality line of Rollator Refrigerators, Gas and Electric Ranges, Washers and Home Heaters, Norge will offer new pace-setters in postwar profitmakers for Norge dealers to present to America's waiting homemakers . . . all the opportunities for a great future.

Norge means new products for waiting home owners to buy. Norge means new products for far-thinking dealers' profit. Norge means a *successful future* for Norge dealers!

Norge Division, Borg-Warner Corporation, Detroit 26, Michigan

A BORG-WARNER INDUSTRY

ONE FAMOUS NAME—
...All Major Appliances

BETTER PRODUCTS FOR A BETTER WORLD

SEE
NORGE
BEFORE YOU BUY

"...for outstanding production of war material."

M.T. Gossett Co., Nashville Distributor, Takes Added Space For Postwar Contracting Work

Firm Has Done Unusual Food Processing Wartime Jobs

NASHVILLE, Tenn.—While up to its neck in war jobs and in others connected with vital food production, the M. T. Gossett Co., refrigeration and air conditioning contractors of this city and dealers for Carrier equipment, recently took off enough time to make plans for postwar operation and expansion.

M. T. Gossett, president of this 15-year old concern, announced he had purchased land with 152 feet of frontage at 12th and Church Street on which he would erect a two-story place of business after the war. It will include an office, sheet metal shop and a display room with 100 feet frontage. He will display, sell, and install a complete line of refrigeration, heating, and air conditioning equipment.

In the past several months this concern has installed the refrigeration on 14 subchasers and two mine sweepers. It also fulfilled a contract for Montgomery County Locker Association at Clarksville, Tenn., which rebuilt its locker room and installed 150 new lockers to bring the total to 450.

An unusual job was that of equipping the Nashville cold storage and freezer rooms of the Domestic Egg Co. of New York. Used equipment was utilized on this job including a 10 by 10 York and a 7 x 7 Frick machine with a 12½ x 12½ booster machine for quick freezing. The egg company has 16,000 square feet of cold storage which is maintained at 32 to 36 degrees temperature and 3,200 square feet of freezer space where a temperature of minus 20 to zero is maintained. The processed eggs are packed in 30-pound pasteboard containers, or tins if available, and shipped to seaboard in ordinary refrigerator cars, packed in salt and ice to hold the temperature down.

The Gossett company has handled several other contracts involving food storage including that for Kleeman & Co., Nashville packers, who installed a new beef chill room and also Quality Food Store, Pulaski, which increased the number of lockers in its locker plant from 276 to 600 and built an entirely new establishment.

Van Vleck To Manage Worthington Branch

HARRISON, N. J. — Worthington Pump & Machinery Corp. has announced the appointment of William J. Van Vleck as manager of its Atlanta office, succeeding Edward Stauverman, who, after many years of association with Worthington, has resigned to engage in another line of business.

Mr. Van Vleck entered Worthington's employ in 1924 as a member of the student group. Since 1938 he has been assistant manager of the Philadelphia district office.

Lacey Heads Eastern Appliance District For Westinghouse

NEW YORK CITY—H. B. Tompkins, manager of the eastern district of the Westinghouse Electric Supply Co., has announced the appointment of E. M. Lacey as eastern district appliance manager with offices in New York. Mr. Lacey succeeds J. L. Johnson who was recently appointed appliance manager of the northwestern district, Chicago.

Mr. Lacey became refrigerator sales supervisor for New York state, excepting New York City, in 1938. With the outbreak of the war he was made supervisor of advertising and promotion for the eastern district with headquarters in New York City. He also handled the advertising campaign in Mansfield, Ohio, for war bonds in the Westinghouse plant and promoted the company's Health for Victory nutritional program.

'F-22' Refrigerant For Alabama Locker Plant

JASPER, Ala.—A new locker storage plant of 400 lockers is being built at Jasper, Ala., by Joe Short & Associates. "F-22" will be used as the refrigerant instead of ammonia as first planned. It will have a sharp freezer 7 by 15 feet in size with dollies being used to move food in and out.

York Corp. Survey Reveals Desire of Veterans For Better Jobs Upon Return

Replies Show That More Than Half of Them Have Acquired Skills Fitting Them for Upgrading

YORK, Pa.—G.I.'s who return to the companies they left do not want their old jobs back. About 40% want better jobs using their Army skills. Others expect additional training while working to qualify for higher positions. They are anxious to get women out of the shop and back into the home.

These are the findings of one of the first surveys taken among former industrial employes now in the armed services on their postwar job thinking. It was made by the York Corp. as part of a plan to prepare for returning servicemen by making full use of their Army and Navy developed skills in new postwar jobs.

The answers revealed that 80% of the company's typical U. S. industrial workers now in military service expect to return to the York Corp. Fifty per cent listed special trades learned since they left and 40% of these believe this training qualifies them for a better job when they come back. Nearly 30% want to take advantage of a government plan which will help pay part of a veteran's salary while he undergoes new job training in the company.

WOMEN WORKERS LOOKED UPON AS PROBLEM

More than 75% of the men and women surveyed declared themselves optimistic about postwar employment in industry but 50% selected women in industry as a major postwar problem. Although appreciative of the job women have done for the war effort, unsolicited comments were explicit: the G.I.'s surveyed want women industrial workers replaced by men as speedily as possible and returned to their homes.

Rather than wait for the mass return of former employes, York months ago sent its individual questionnaires to servicemen scattered all over the world to plan in advance for the readjustment of war-experienced men back into peacetime industry, according to J. E. Moody, manager of industrial relations.

"The problem is not as simple as giving back to each veteran the job he held when he left," said Mr. Moody. "To do that would be to wastefully discard valuable skills patiently taught by the Army and Navy over a period of months or years. The nugget of the York Corp. plan is to make use of every bit of military education wherever possible to give the returning veteran a better job, the chance for a better income, and the kind of opportunity his Army initiative has earned. These skills, now that they are known in each man's case, are being geared to the company's production requirements."

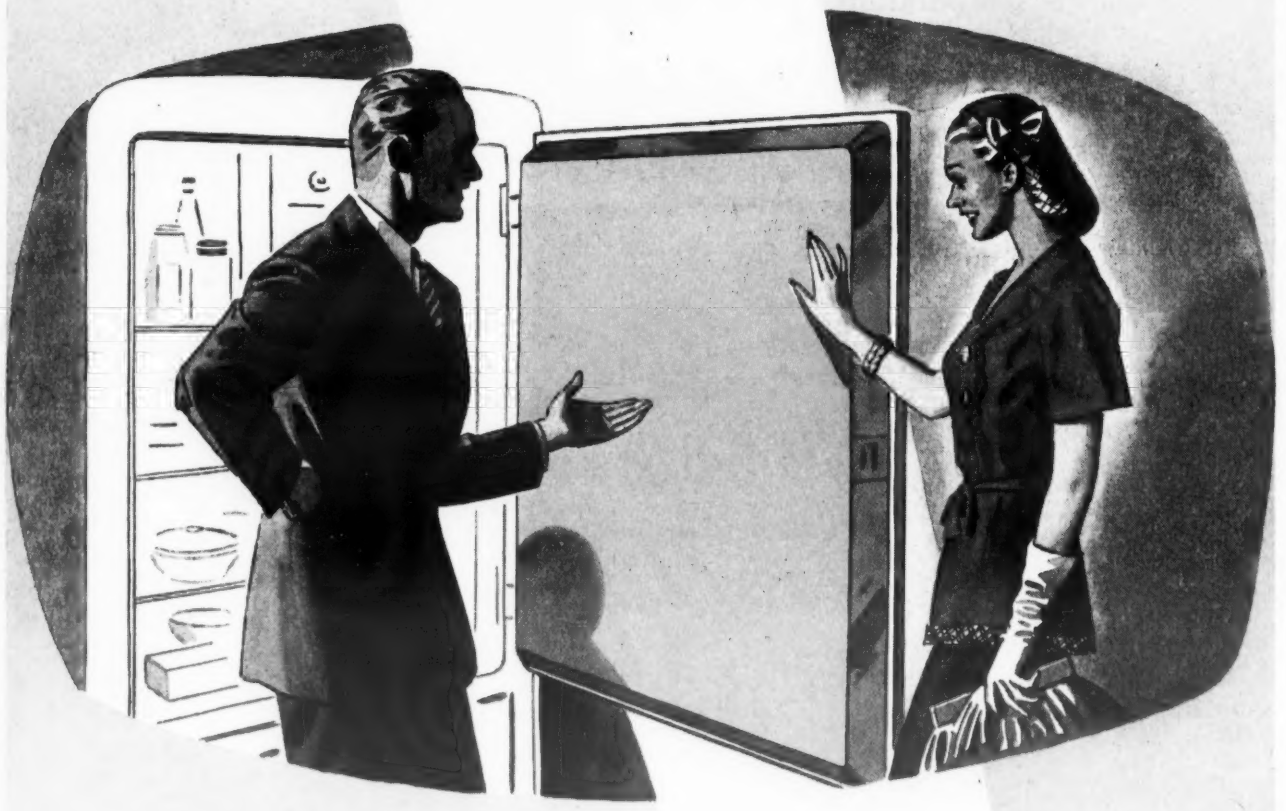
SOME EXAMPLES OF BOTH SERVICEMEN & SERVICEWOMEN

As examples of Army training, Mr. Moody cited the case of a girl typist in the company who has become a WAC officer in charge of a motor depot with 300 mechanics under her, a mail clerk who is now a graduate Army engineer, a payroll clerk trained in logistics, and an ex-drill press operator who has become a first class servicing mechanic on refrigeration. It would be foolish and unfair, he said, to offer such veterans as these the same jobs they left behind—and they wouldn't accept them anyway.

"Because of military experience, this task is far simpler. The average veteran can learn any new skill in six weeks just as he learned his Army or Navy work. He thinks and acts faster than ever before, thanks to the discipline he has had."

Mr. Moody pointed out that the survey shows that most veterans themselves can suggest a new job in the company for which their extra training has fitted them. When they can't, York's industrial relations men will help.

Make your DOOR BACK a selling point



YOU know how often appearance and beauty is the deciding point when women buy!

And you can give your refrigerator a completely new beauty and modernity by using doorbacks and breaker strips of colored and figured Formica.

The tints may be delicate with light crystalline figures. The surface may be embossed with any of a wide range of designs you may specify.

Your customers will be expecting something different after the war. This is a way to give it to them.

Let Formica engineers tell you the story.

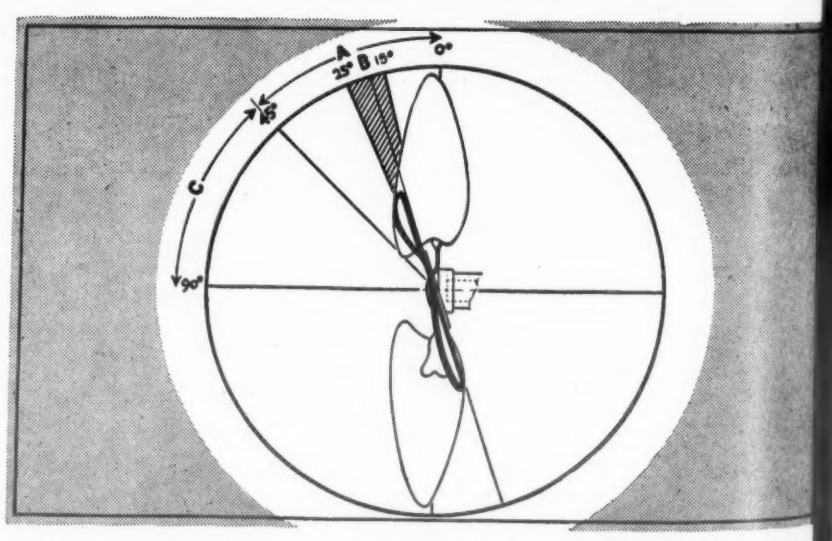
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No. 10 of a series



A. 0°-45° pitch—range of effective axial flow. B. 15°-25° pitch—range of maximum axial flow. C. 45°-90° pitch—flow largely radial.

BLADE PITCH OF PROPELLER FANS

THE angular pitch of propeller fan blades has a definite relation to air delivery, efficiency, noise and power.

Air delivery may be increased by increasing the angular blade pitch, whether the fan is operating in free air or against pressure. However, with increased pitch there is a corresponding increase in air turbulence, which tends to cause noise.

Up to a 45° blade angle, air flow is axial but becomes largely radial beyond 45°. When a fan is blowing against an obstruction, such as a grille, or louvres, there is a tendency for the air discharge to become radial, and the greater the pitch the more pronounced is the tendency.

For the various sizes and types of fan blades the ideal pitch at which fan efficiency reaches its maximum will be found between 15° and 25°. In general a larger diameter fan with less pitch will give the desired air delivery with greater efficiency, less noise and less power consumption than a smaller diameter fan with blades having more pitch.

Costly changes and delays may be prevented by consulting us during the early design stages of products using air impellers. There is no obligation for this service.

THE TORRINGTON MANUFACTURING CO. TORRINGTON, CONN.

Manufacturers of AIRistocrat Quiet Propeller Fan Blades & AIRotor Blower Wheels

SHE'LL READ IT TONIGHT.. AND THANK YOU FOR YEARS!



New, 104-page Year 'Round Meal Planning Guide . . . is sure-fire way to win friends and influence customers

Forget you . . . how could she! What with your name big as life on the back cover of this book she'll use daily!

Building good will is the smartest trick you can stage, these days. And this marvelous new book will do it for you. How?

First, it takes the grief out of meal planning . . . and show us the woman who won't welcome that one!

Second, it gives her plenty of practical low-down on getting full value for her food dollars . . . another tender spot in a woman's heart.

Third, it shows her how to be an even better cook . . . and most women are pretty vain about their cooking ability.

Fourth, but why go on . . .

How many Year 'Round Guides do you need to do a real job winning future customers for you? Price only 10 cents each; imprinting to be done by your local printer. Order direct from your Westinghouse distributor, today!

Distribute Guides where they'll do you the most good



Leave One on Service Calls
You've fixed her appliance, she's pleased with your work. Then to top it off, you make her a gift of this useful book. That's plenty of good will!



Reminder to Preferred Customers
You've done your best to sell them the idea of buying from you . . . when appliances are available. But folks forget. This book will keep you in their minds.



Good Will Builder at Meetings
Pass 'em out at Women's Clubs, Church Socials, P.T.A. meetings, and so forth. They'll prove a "surprise" present that pays you off for years!

3 times a day.. every day.. she'll use it



Women Love Recipes!
455 tried and tested recipes are given. Delicious. Easy to make. Inexpensive. All passed by a taste-testing jury of men and women.



Women Want Menus!
16 complete daily menus, plus alternate suggestions. Thousands of meal combinations. And 4 special occasion menus. All necessary recipes included.



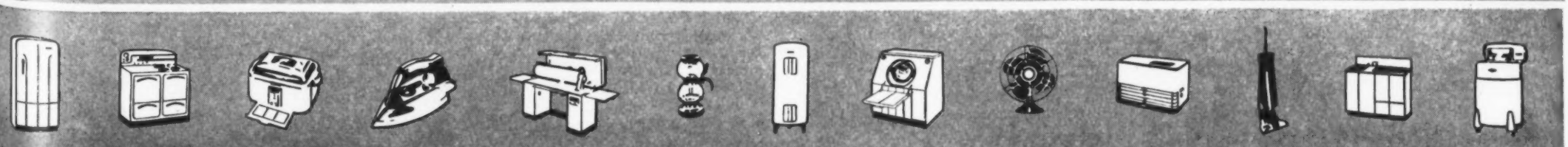
Women Need Marketing Help!
Tells what cuts of meat to ask for, for different dishes. Plenty of concrete advice on how to buy fruit, vegetables and fish, too.

Tune in John Charles Thomas Sunday 2:30 E.W.T., N.B.C. Hear Ted Malone, Mon. Wed. Fri. 10:15 EWT., Blue Network.

Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

ELECTRIC HOME APPLIANCES



Inside Dope

By George F. Taubeneck

(Continued from Page 1, Column 1)
tive territories during the year which makes mass production schedules possible.

Without the wholesale function there'd be no mass production for individual consumers. A manufacturer cannot produce for individuals. He must have a few large customers. So, he turns to wholesalers who in effect are "large customers," though they buy for resale. The wholesalers, in turn, supply retailers whenever the latter finish the distribution cycle with a sale to an individual buyer.

Wholesale distributors bridge the river between:

(1) Place of production and place of purchase.

(2) Time of production and time of purchase.

(3) Manner of production and manner of purchase.

Whether effected through factory branch, partially owned wholesale subsidiary, or independent distributor, these functions must be performed if mass production is to be made possible.

Mass production makes low prices. Without wholesale distribution mass production would be impossible. Therefore, wholesale distribution lowers prices. Q.E.D.

This is true no matter how high the distribution cost percentage runs in a **competitive system.** Competition can be depended upon to keep distribution costs from being extravagant. And with the volume of production that a sound distribution systems makes possible, costs to the buyer are bound to be far, far lower than they would be under the old-fashioned system of direct relationship between individual buyer and one-man fabricator.

That so-called "extravagant spread" between production cost and retail cost includes items that most customers insist upon receiving even while they beef about the cost of distribution.

Such items include credit, warehousing, transportation, communciation, explanation, availability, and a big smile.

Consumers demand SERVICE with a capital "S." And even though they may not be served too well during these harried times, you can bet your last "A" coupon that they'll again demand to be coddled the moment the manpower punch and product scarcities ease off.

An intangible but terribly important figure which goes into the "mark-up" on any product sold at retail is the ego-salving feeling of superiority which the customer enjoys—or used to enjoy—coincident with every purchase. It costs money to make that feeling possible. It's worth money, too, to experience the feeling!

This one fact seems incontrovertible: No matter how much distribution costs, if it results in a lower net price to the consumer, the consumer is better off. It's the retail price itself that counts—not the distribution spread. And if that price must compensate for services to the consumer which the latter insists upon buying, the consumer is still better off than if he didn't have the product at all—which he wouldn't have if mass selling didn't make mass production possible.

In arguments, the defender of distribution costs is always put at a momentary initial disadvantage by the negative proposition that distribution costs are intangible, whereas production costs are tangible. But it's the intangibles which make the world go 'round. Intangibles comprise our highest values.

To use a crude illustration: Any man can "buy" a woman. But what price does he set upon love?

Time, place, and satisfaction are all utilities more highly valued than goods in our civilization.

It does not follow, however, that all wholesale-retail distribution systems are the ultimate in efficiency, any more than all manufacturing establishments achieve the lowest possible cost figures. There are high-cost distribution systems, just as there are high-cost manufacturers.

And it behooves all major appliance distributors to study their methods with a view toward lowering their costs by every possible means. If they don't the normally high-cost manufacturers' branches are bound to supersede them.

Just as many manufacturers have built plants with costly, excess capacity, so it is that many distributors have built up dealer aggregations which are overlarge, unwieldly and costly.

Selective selling is a science which every distributor needs to study in the immediate future. Put in concrete terms, he must study every product he sells, to find if it pays his way. He must also study every dealer operation he serves to find if it pays its way. Selective selling, for the distributor, means carefully limited dealer outlets as against indiscriminate numbers of dealers. It means profitable volume and satisfied dealers.

All too many distributors have gone on adding product lines and dealer franchises indiscriminately. Lack of adequate cost accounting has deceived them as to the cost of this continual expansion. Careful, detailed accounting might reveal dealerships whose business is unprofitable to serve, and "marginal" product lines which are unprofitable to handle. Size of territory has no relation to profits—a fact which misleads all wholesalers who do not have the benefit of accurate accounting.

Detailed cost studies with regard to quantitative analysis and selective selling for the distributor can be fully as important as cost accounting and scientific management studies are to the manufacturer.

Sales volume and distribution costs need to be analyzed by the wholesaler in detail, instead of his following the lazier practice of lumping them all together. Expenses and sales must be matched with their respective retailing and manufacturing units. Then sales can be confined to profitable product lines, profitable retail customers, and scientific territorial allocation and penetration.

One lesson the appliance industry has learned from the "mail order" chain store type of merchandising is that a few strategically located, adequately promoted, **good** retail outlets can outsell, at lower costs an infinite number of order-taking, stepping-on-one-another's-toes dealerships. It's not how many dealers, but how much they sell, that counts.

It has taken the industry a long time to learn this. And sometimes we wonder if the lesson ever will be understood. The whole sad, confusing, expensive picture or overfranchising may be painted all over again and again and again.

Smart distributors will take cognizance of the criticisms which are periodically leveled at them and their function, and will do all they can to lower their own costs. They will even accommodate themselves to a smaller "take," if need be, through such minute studies of their own operations.

But they can take comfort from knowing that their function is invaluable, and that if they themselves are on their toes, nobody is going to be able to "eliminate" them. For instance:

Recently a questionnaire was sent by an independent research organization to 529 typical war plants located in 25 different cities across the country. These plants are producing machine tools, airplanes, engines, ships, explosives, etc. Some are large, some are medium, some are small.

Exactly 165 busy wartime executives took the time and made the effort to fill in the answers to these three questions and send them in. Here are the three questions and the answers:

Question No. 1—Is it an advantage to have a wholesaler in your local territory?

The answers were all in the affirmative.

Question No. 2—Does it simplify your purchasing to draw from one single source many products?

One hundred fifty-eight said "yes."

One said "no."

Seven did not answer.

Practically every one of these executives, who ranged from president to engineer, went on record that the wholesaler renders an important service to them.

Herbert Metz of Graybar Speaks

Herbert Metz of Graybar Electric Co. (who is chairman of the postwar planning committee of the National Electrical Wholesalers Association) makes the following colorful remarks about the wholesaler's unassailable position:

We Americans like size and efficiency, to be sure. We also like personalized service.

"It is strange isn't it, or is it, that despite the growth of the chain store idea the corner drugstore and the neighborhood grocer are still going strong.

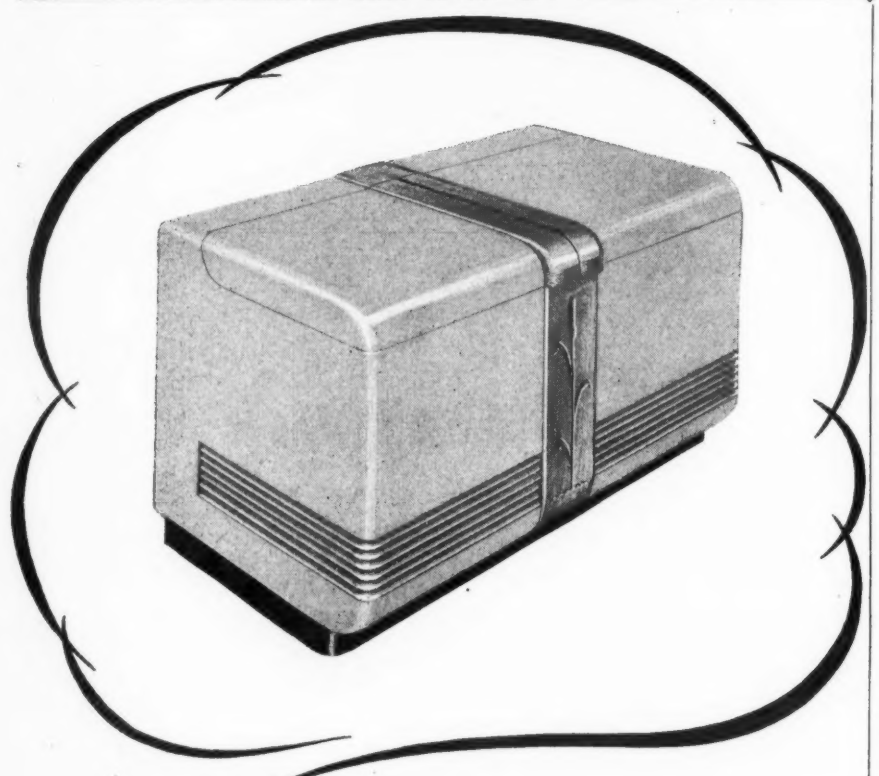
"The small specialty shop run by Susie Smith still is a flourishing institution.

"I have a friend who is very close to the food situation. He tells me that the wholesale grocer who was doomed to extinction 30 years ago when the grocery chains really started to grow is, like the electrical distributor, still a virile, active, and lively institution.

"He tells me that notwithstanding the vicissitudes encountered by the wholesale grocer during the past 15 years, he seems either to have retained or regained his position. Those who have gone out of business through liquidation or consolidation appear to have been replaced in numbers and in volume by newcomers in the field and by general growth in volume.

"The reasons appear to be, first that the retail grocer—the neighborhood store, with its service—is needed and wanted by the public and that

(Concluded on Page 11, Column 1)





In the "Post-War Plans" of many Farm Families--

The BEN-HUR Farm Locker Plant

Talk to any farmer about a farm locker plant and his first comment will be, "wish we had it now." And he'll follow with the promise that food freezing and frozen storage is the FIRST thing he's going to add after the war.

For most farmers already know the benefits of owning a BEN-HUR FARM LOCKER PLANT . . . the advantages of freezing and storing farm-grown vegetables, meat, poultry for delicious meal variety weeks and months later . . . the economy and savings in food costs . . . the satisfaction of preserving the finest of their own produce . . . the time saved in avoiding shopping trips to town.

This is evidence of your future market for new BEN-HUR FARM LOCKER PLANTS—a volume market ready just as soon as they can be produced.

Let us put your name on the list to receive complete data and sales information on BEN-HUR FARM LOCKER PLANTS, when this data can be released.

Today . . . back our fighting men with more war bonds

ARMY-NAVY "E" Awarded Ben-Hur for outstanding achievement in War Production.

BEN-HUR MANUFACTURING CO.
634 EAST KEEFE AVE. - MILWAUKEE 12, WISCONSIN

Unite With

United

For Postwar Leadership

During our all-out effort for the war our plant has trebled in size and our production facilities have multiplied several times our best prewar output. Obviously, we will be able to build more and faster than ever before when the green light flashes for civilian production. And because what we make in wartime is practically what we make in peacetime, we will be able to "reconvert" with the least possible delay.

These are important considerations for distributors and dealers who want to be able to supply the greatest pent-up demand in history . . . quickly and profitably.

Unite with United for a generous share of the postwar market and a commanding position in the refrigeration field.

UNITED REFRIGERATOR MANUFACTURING CO., INC.
366 Wacouta Street
ST. PAUL 1, MINNESOTA

United silica gel

Inside Dope

By George F. Taubeneck

(Concluded from Page 10, Column 5)

store, in turn, needs the wholesalers; second, that the wholesaler renders services to the manufacturer, to the retailer and through him to the consumer that must be performed by someone, and experience has repeatedly demonstrated that the wholesaler, serving many manufacturers, can do the job more cheaply and efficiently than any one else.

"In short, the functions of distribution are essential to our economy. If the wholesale grocer goes out of business, the job he performs must be taken over by some one.

"I am not so fatuous as to think that there will be no changes in manufacturing, in retailing, and in wholesaling postwar, but I do believe that whether it be electrical equipment, washing machines, vacuum cleaners, or tires, that merchandise must be taken from the man who makes to the man who uses or sells. This means, in essence, that a distributing function must be performed no matter under what name you might term it.

I believe further, that the efficient, alert, and active distributor or wholesaler will continue to be as he is today, the channel through which the bulk of that merchandise will continue to flow, more effectively in some years than in others but continuing on, ever striving to be more efficient as the years go on."

Philco's Paul Jones Finds Economy and Virility In Present System

Vigorous dissent to the "opinions formed by a whispering campaign that distribution methods of mechanical refrigeration are (1) too expensive and (2) too unresponsive and lacking in control," are sounded by W. Paul Jones, brilliant young vice president, Philco Corp.

"The first charge," declares Mr. Jones, "says in effect that the product costs the consumer far too much money as a result of wastes in the system.

"The second charge is that independent distribution is too subservient economically to the manufacturing sources to reflect adequately customer demands and market needs.

Cost of Any System Is Purely Relative

"Against the No. 1 charge—that the system is too expensive—I submit that the expense of operating any distribution system is purely relative to the actual distribution accomplished, and that under the present system, and included within its costs we have reached and opened the world's most remote, inaccessible, and most expensive to serve markets.

"The present system provides financing for carrying the slow pay dealer, who is just as important and necessary as his counterpart, the independent corner grocery store, proved to be in food distribution. The marginal volume dealer, who alone can serve the many relatively inaccessible areas, is allowed existence only under the present system.

"It is needful in any system that someone carry, without too great markup, the burden of field inventory costs. Today, those costs are allocated fairly between mass markets and lean ones.

"Great factor in cost reduction is volume of production—which results only from increased volume of sales, and which in turn can come only from a broad advertising, merchandising, and educational approach. Our present system has made and kept a place for those three essentials.

"I submit that no system of distribution can be such in fact or in deed unless it serves not the mass market alone—but likewise serves the thin one. Further, that our present system brings the customer the ultimate benefits of lower cost, by application of individually operated smaller business acumen, which in turn, brings lower overhead.

"Against the Charge No. 2 that the system is too unresponsive and lacking in control, I submit that selfishness as expressed and personified in individual business ownership, is selfishness virtually controlled by the ultimate consumer. Through no other system can the likes and dislikes of both Judy O'Grady and the Colonel's Lady reach the boss so quickly.

"Admittedly both distributors and dealers show great concern with profit-making, with stock turnover, with exploitation of their individual brand. But given a worthy brand, their overall market development efforts are likely to be quite as effective as the better integrated chain or branch institutions.

"Those efforts will stem naturally from responsiveness to sales pressure by the dominating organization—in most cases the manufacturer.

"The concern for stock turnover, far from being a shortcoming, aids in the greatest sense in protecting the industry from over-production.

"The independent mind, though selfish in viewpoint, is far superior to the hired-man mind. The hired man needs must take in whatever we may ship. We are thus deprived of counter-pressure at a most crucial time for the prevention of unbalanced inventory and its resultant waste.

"Anyone who has seen the system operate at close range knows the lethal traveling speed of bad news—resulting from poor product judgment. Therefore, dealer reaction to the product accurately and swiftly reflects consumer thinking.

"Economic subservience in the present system is in truth a myth. Comparably — or in contrast — any variance of the system in the direction of straight line control must tend to increase economic interdependence of the various units.

"In conclusion I say that whatever substance of truth there may be in the charge of lack of control can, and should be, accepted with equanimity by the industry, because the very essence of private enterprise is in itself a lack of control also.

One of the most important operational phases of the whole business after the war will be that conducted by this credit department. Extension of lines of credit will require the most careful scrutiny of financial, marketing, and merchandising factors.

Only individuals adequately trained and experienced in credit and collection procedures can be expected to cope with the requirements of the situation in the postwar years. Whether or not the credit department will be a business builder, or will constitute a bottleneck to the wholesaler's operations, will depend chiefly upon the quality and size of that department.

Unquestionably a great deal depends on the electrical wholesaler's handling of that situation.

New accounts will involve tough credit problems. What will the policy be regarding bad debt losses?

These are among the problems to which the electrical wholesaler now must devote attention in order to have his house in order in the postwar years.

In the postwar era the electrical wholesaler who performs necessary functions, such as credit control, in the best interests of the retailer and the consumer will continue to do business.

The successful appliance distributor must further see that the retailer performs the functions for which he receives the margins. Those margins are only justified when he performs a good service for the consumer.

Manufacturers, in order to avoid unprofitable pressure selling, should make honest market studies to determine just what the market situation really is.

D. W. Russell, president of the ambitious Airtemp Div. of Chrysler Corp., makes the following analysis of the indispensable part the distributor plays in our mass production, low-price economy:

1. He stabilizes employment in the plant and insures a continuous supply of labor with "know how." Consequently, you obtain a consistent and a much better product.

2. The manufacturer can adjust the plant to the most economical level for the volume, and thereby make the most favorable prices.

3. With a definite volume ahead, the manufacturer can often afford better tooling and again assure lower prices.

4. A pre-determined volume often allows commitments for materials that will affect the price structure.

5. Lower prices broaden the market. The automobile and domestic refrigerator are excellent examples.

Only through a satisfactory profit can capable men be kept interested, working, and connected with this industry. An organization must have this profit if it is to obtain character and standing in a community. It must have profit if it is to carry its part of the load in promoting this industry.

As a final word on the impregnable position held by the distributor, Harry Alexander, management consultant, has been combing through the sales and earnings figures by industries which are available through the Securities & Exchange Commission, Philadelphia. They cover the seven years from 1936 through 1942.

In them he finds that Bigelow-Sanford Carpet Co. sold direct to the trade during this period. Mohawk Carpet in the same period sold through independent distributors—83 of them. Here are the sales and operating profits, totaled for the seven years, as reported to the SEC:

	Sales	Operating Profit	Profit as % of sales
Bigelow-Sanford (direct) ..	$210,300,000	$18,000,000	8.62
Mohawk Carpet Mills (distributors)	$144,800,000	$20,700,000	14.29

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Every square inch of surface is prime heat pick-up.
For Frozen Food Lockers, Deep Freeze Cabinets, Milk Coolers, Fruit and Vegetable Counters, etc.
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Photo Etching
Silk Screening
Product Decorating
Metals Laboratory
Engineering Design
Product Design

CURRENTLY SERVING THESE INDUSTRIES

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• • • built up through half a century of leadership in the exacting Watch Case Industry will be available soon to many manufacturers who will require large quantities of small precision parts for their postwar assemblies.

Work of this character is now being supplied to many leading companies which normally produce radio equipment, refrigerators, automotive parts, precision instruments.

Illustrated are nine small components of an Ordnance assembly which Wadsworth furnishes in great numbers. The production of these pieces, which are held to very close tolerances, brings a score of special Wadsworth facilities into play.

Wadsworth workers' feeling for precision and their ability to get work out on time will ease postwar headaches for many producers.

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SMALL PARTS DIVISION
THE Wadsworth WATCH CASE CO., Inc.
DAYTON, KENTUCKY, SUBURB OF CINCINNATI, OHIO
PHONE COLONIAL 8194 • (CINCINNATI EXCHANGE)
★

Public Must Be 'Educated' To Demand Better 'Indoor Climate,' Forum Told

(Continued from Page 1)

similar industries," averred Mr. Zimmerman. "There are generally three periods in the development of most specialty items:

"1. The introductory period during which the engineers and inventors are in charge of the industry. This period may run about 15 years and will account for approximately 10% of the potential sales.

"2. The acceptance period during which specialty selling comes into its own. This period, which likewise lasts about 15 years, accounts for about 45% of the potential sales.

"3. The demand stage during which retail merchants predominate. By this time it is not necessary to go and sell the item to the public, for the specialty salesmen and dealers have done that. The article is accepted by the public, and it is only necessary to supply the demand.

"To my mind, the indoor climate or air conditioning industry is now at the beginning of the second stage," he declared. "However," he pointed out in comparing the air conditioning industry with the refrigerator and other specialties, "the joint efforts of the entire industry have been needed in the past to sell a new idea, such as the refrigerator, to the public, builders, and architects.

"Builders must learn to use 'human comfort' as a selling point in home sales, and utility companies can also tie in on the program of air conditioning to help take up the surplus in postwar loads," said Mr. Zimmerman.

He then cited a survey which showed that less than 3% of the people who buy homes now ask about the type of heating system.

This industry will need 100,000 specialty salesmen after the war, Mr. Zimmerman also pointed out, and these salesmen must be trained. For this latter purpose, and likewise for promotion of indoor climate in general, Mr. Zimmerman urged the establishment of local chapters to enlist the aid of all factors interested. Local chapters, he said, should conduct training schools for these new salesmen.

Because people will spend more time indoors in the future than at present, controlled indoor climate should and will be widely accepted, concluded Mr. Zimmerman.

Public More Interested, Art Schanuel Contends

The next speaker, A. E. Schanuel, executive secretary of the Indoor Climate Institute, further expanded the need for "Organizing the Industry's Sales Story."

"Controlled Indoor Climate is a new standard for better living," he declared. "Although central heating was the first modern convenience to come into the home, the public is now too complacent about the need and value of greater indoor comfort and health.

"We must remember," he said, "that we are competing against bathrooms and kitchens in trying to promote better indoor climate. At present the housewife wants to show off her modern bathroom or kitchen. We must tell our story to arouse the interest of the public to the point where home-owners want controlled indoor climate."

That the public interest in air conditioning is rising is shown by the results of a survey made by the National Association of Home Builders, said Mr. Schanuel. This survey (published in the July 17 issue of AIR CONDITIONING & REFRIGERATION NEWS) showed that 72% of the public questioned expect that complete year-around air conditioning equipment will be available within 10 months after the war's end at a price they can afford to pay. And 54% of prospective home builders said they wouldn't buy or build unless they could get complete year-around conditioning.

"The public and sellers need and want information and guidance on controlled indoor climate now, so let's give them the guidance now," Mr. Schanuel told the I.C.I. forum audience.

"Up to now, the sales promotion and advertising efforts of the heating, cooling, and air conditioning industries has been confusing the public. There is a cumulative effect of over-all loss in appeal to the public and sellers.

"I think the best publicity medium for promoting indoor climate to the public are the home magazines going into 19,000,000 homes every month, while local organizations of the I.C.I. should and will promote architects and builders," concluded Mr. Schanuel.

Push Quality Lines, Jack Knighton Suggests

Just what selling approach that should be used in promoting controlled indoor climate hinges on the need of pushing quality rather than price lines, especially in the heating field, declared J. K. Knighton, sales manager of Servel, Inc. air conditioning division.

"We have been on the defensive so long that it has become a habit," said Mr. Knighton. "Heating costs have dropped 50% in the past 20 years and 'price lines' have constituted 80% to 85% of the volume."

"The public's concept of heating places it in the category of a necessity, but there is no real appreciation of heating by the public. Quality heating must become a necessity," Knighton declared. "And quality heating is simply a B.t.u. dressed up so you wouldn't recognize it for the utmost utility. We are now judged, however, by the 'stripped B.t.u.' and there is about 60% difference in cost between the 'stripped B.t.u.' and quality heating."

Admitting that selling indoor climate is more complicated than selling a specialty item such as the refrigerator, Mr. Knighton stressed the need for sales engineers.

"We must combine creative selling with sales engineering at no increase in sales costs, and because the average consumer buys only one heating system in a lifetime, we must be responsible for his making the best choice," he declared.

To increase the sales of quality heating equipment, Mr. Knighton suggested that the margin on the quality should be lowered, and that this reduction be offset by a higher margin on the price line.

'Overselling' Dangerous, Emphasizes FHA Director

Following Mr. Knighton, Raymond M. Foley, Michigan State Director of the Federal Housing Adminstration, told the I.C.I. group that the most frequent complaint which has come from owners of 100,000 FHA-financed homes in Michigan in the past 10 years is "failure of equipment in the house to come up to the expectations of the home owner."

"Frequently heating and cooling equipment has been 'oversold' by the manufacturers, and the price line has been sold as the quality line by the sellers," he averred. "There has not been enough relationship between the manufacturer and the seller on the problem of servicing, too, particularly on the price line.

"The postwar public will still be price buyers, and this will be further complicated by the fact that there has been some overselling of what may be used in the average home after the war," continued Mr. Foley.

"In general," he pointed out, "architects of small houses have not been interested in the installation of heating equipment. There have actually been no layouts of the heating system prepared for the builder so he frequently had to make readjustments during the installation of the equipment that often interfered with the system's operation."

Predicting that the average postwar home buyer won't have any more money to spend on housing than he had in the past, Mr. Foley suggested that I.C.I. study present building practices to attempt elimination of "unnecessary items" so that more money could be invested in heating or air conditioning equipment with no overall increase in the price of a house.

Mr. Foley decried the fact that the public's ignorance has been much abused, particularly in regard to heating and insulating houses, and warned his listeners that "the worst enemies of your business are in your business.

Women Expect Much Better Equipment

Presenting the "Woman's Viewpoint in Home Building," Mrs. Henny Mollgaard, a builder herself, declared that women do not want or expect much change in the exterior of houses, but they do want great improvement in interior equipment. Because women are today more conscious of the health and physical welfare of their families, they are likely to demand better controlled indoor climate, she predicted.

(Concluded on Page 13, Column 3)



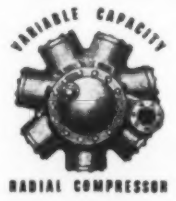
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When the thermostat signals for cooling, an exclusive, built-in unloader permits Chrysler Airtemp Radial Compressors to attain full motor speed before they begin to pump, thus lowering current consumption.

Coupled with Variable Capacity, which automatically cuts cylinders in or out—one at a time—according to the load—the unloaded starting feature of Chrysler Airtemp Radial Compressors assures smooth, economical operation with a minimum of wear and tear on the unit. That is why the light weight, direct-connected Chrysler Airtemp Heavy Duty Units are establishing such amazing performance records in meeting tough refrigeration and air conditioning requirements.



It will pay you to investigate Chrysler Airtemp when you are faced with any kind of a problem concerning temperature-humidity control. Airtemp Division of Chrysler Corporation, Dayton, Ohio. · In Canada, write Therm-O-Rite Products, Limited.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS., 9 p. m., E. W. T.

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- LOOK FOR THE DAVCO LABEL
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DAVISON Refrigeration Type Silica Gel is designed and processed especially for the Refrigeration Industry. It gives maximum capacity for moisture . . . gives instant and positive action . . . removes acids and corrosive compounds . . . is free from chemical action in the system . . . eliminates the hazard of dusting or powdering . . . is non-channelling — the refrigerant cannot pass through the cartridge without fully contacting the silica gel.

Eliminates moisture, which causes the large proportion of refrigeration troubles and service difficulties.

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Heads of Indoor Climate Institute Confer



Just before the banquet of the Indoor Climate Institute forum in Detroit "Bill" Stout (at right), pioneer of modern aviation, chats with T. A. Crawford (left) of Timken, J. R. Scott of Mueller Furnace, P. B. Zimmerman of Airtemp, and C. D. Lyford of Minneapolis-Honeywell.



Advertising counsellor, president, and a director of the I.C.I. confer informally between forum sessions. Left to right are Edward R. "Ted" Grace, P. B. Zimmerman, and C. D. Lyford.



Here is the board of directors governing I.C.I. (Front row, left to right) J. P. McIlhenny, C. T. Burg, J. K. Knighton, J. M. McClintock, A. E. Schanuel, L. N. Hunter, T. A. Crawford. (Back Row) C. D. Lyford, W. L. Seelbach, J. R. Scott, Jack Searls, E. N. McDonnell, R. E. Moore, P. B. Zimmerman.

Objectives of I.C.I. Outlined at Forum

(Concluded from Page 12, Column 5)

"They have a right to expect modern conveniences, and they shouldn't have to wash walls twice a year due to inefficient heating systems," she said. "They also say they want individual room controls for home heating and air conditioning systems," she added.

The role which utility companies may play in promoting indoor climate can be one of active support, declared M. E. Skinner, vice president of Buffalo, Niagara & Eastern Corp.

"The public will decide what products are essential to the 'complete home' so we will have to go to the public to persuade it that the electrical way is the right way," he declared.

At present the operative builder makes many of the decisions as to what goes into the home, and the primary basis of his decision is whether or not he will make money—thus the need for selling the public directly on controlled indoor climate and electrical living, pointed out Mr. Skinner.

Some utilities are now preparing to promote a "four star electrical living" program and complete year-around air conditioning ought to be included as a prerequisite for perfection in electrical living, Mr. Skinner declared.

The "perfect home," under this plan, will be permitted a four-star emblem: the first star representing well designed home lighting; the second star, planned complete electric kitchen; the third star, complete automatic electric laundry; and the fourth star, year-around air conditioning.

"A promotion program for such a home will interest all factors in the electrical field, a blue chip field including some of the biggest associations in the country, which will come in and spend money because it will be profitable to them," asserted Mr. Skinner.

Objectives of the Indoor Climate Institute are simply to "stimulate a desire on the part of the public for greater indoor comfort," stated C. T. Burg, general sales manager of Iron Fireman Mfg. Co., in the concluding talk of the first day's program.

I.C.I. does not intend to favor any particular kind of heating equipment and is not aimed exclusively at the small home market, declared Mr. Burg. I.C.I. plans no equipment standards or labels, no technical standards, or regulation of installation standards, he added.

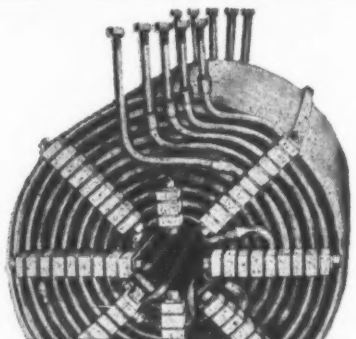
The institute will, he said, help dealers sell better and more desirable equipment; encourage dealers to do a better selling job on the buyer; focus attention of American public on the importance of heating and air conditioning in the home; attract salesmen and engineers to the industry; and "help us get our rightful share of the shelter dollar."

Planning Formation of Local Chapters



At the I.C.I. seminar on local chapter Jack Searls (extreme left) served as chairman. Present were John Haines, Leonard H. Holder, J. P. McIlhenny, H. E. Carney, Myron D. Miller, P. B. Zimmerman, K. L. Wilson, J. R. Waters, Jr., Ernst A. Freund, H. J. Somers, A. E. Schanuel, F. J. Kluempers, John W. Cromer, Walter P. Davis, A. G. Earnshaw, and Charles H. Randolph.

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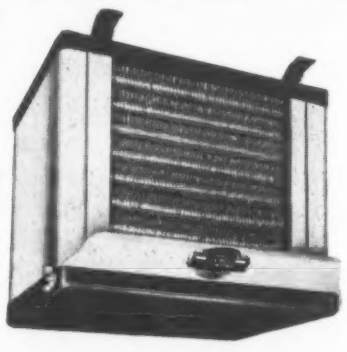
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Sterling Smith Outlines Significant Points In Revised Order L-38

Editor's Note: **The following outline explaining the significant changes in the recently amended Limitation Order L-38 covering industrial and commercial refrigeration and air conditioning equipment was issued by the Refrigeration Division of Mills Industries. It was prepared by Sterling F. Smith, manager of the Mills refrigeration division, and formerly Chief of the Refrigeration and Air Conditioning Section of WPB.**

Because of Mr. Smith's familiarity with Order L-38 this outline bears the stamp of authenticity, and we secured permission to publish it for the benefit of NEWS readers. We suggest that in following this outline you have a copy of Order L-38 handy. The complete text was published in the Sept. 11 issue of the NEWS.

The re-write of Order L-38 has clarified a number of paragraphs which were a little bit ambiguous in the proceeding order. You should pay particular attention to the paragraph covering the use of MRO ratings because this provision in L-38, together with the operation of Priority Regulation 3, will require you to examine all orders on your books covering CMP-5 extensions; and where the equipment is not for a definite replacement, it will be necessary for you to go back to your customer and have him process a WPB-1319 in the local office.

Also note that WPB-2449 has been done away with. All equipment is applied for either on a 1319 or WPB-617 with the exceptions as noted.

Greater Flexibility— Watch Your MRO Ratings

L-38 has been changed to permit a greater flexibility for handling many prohibited items. Four lists have been removed from the previous order, and this amended order lists a Schedule A which gives production quotas for each type of equipment covered by the order. Those types which may not be made at the present time have been assigned a zero (0) quota, which when materials and parts become more plentiful, may be changed to permit production of the particular items involved.

Another change tightens the use of blanket MRO ratings to forbid them to those who acquire refrigeration or air conditioning equipment and hold it for less than 90 days with the idea of fraudulent evasion of the regulation.

Definitions Are Same Except For 'System'

The definitions of the terms used in this order remain the same with the additional explanation that the term "system" includes the equipment used in a domestic or air conditioning system for reducing the temperature of air, but not the furnace or warm air distribution system.

It does not include electric fans which are governed by other orders, nor does it include an ice storage house requiring no refrigeration equipment.

AA-5 or Higher Ratings Required—No Blanket MRO For Reconditioning

AA-5 or higher ratings assigned on Forms WPB-617 or WPB-1319 are required for any delivery or acceptance of a delivery of any new system, any new parts, any new industrial type extended surface heating equipment, any new industrial type humidifying equipment, or any reconditioned system containing a new condensing unit (with or without motor or controls), compressor unit, low side, evaporator, cold storage door, insulated enclosure, or any reconditioned system containing a new condensing unit (with or without motor or controls) or containing a new compressor unit, unless it is needed to replace equipment of substantially the same size or capacity which has become worn out or damaged beyond repair while in the purchaser's possession, and unless he has had it at least 90 days, in which event blanket MRO ratings assigned by CMP-5, 5A, or any other regulation or order may be used.

Also, no blanket MRO ratings may be used to get any new parts to enlarge the size or capacity of any used or reconditioned system or to improve its design or change its function.

AA-1, MRO Is O.K. for Certain Uses

The restrictions in the above paragraphs do not apply to the use of AA-1 blanket MRO ratings providing the equipment is to be installed and operated in the production area, cafeteria, or restaurant of an industrial plant (excluding offices, recreation rooms, conference rooms, drafting rooms, first-aid rooms, change and rest rooms, and dispensaries).

WPB-2449 No Longer In Use

An ultimate consumer who may not use his MRO rating to secure refrigeration and air conditioning equipment should apply on Form WPB-617 or other appropriate construction form when permission for construction is required. Form WPB-1319 should be used in all other cases.

These forms are not required for equipment to be delivered for direct use by the Army, Navy, Maritime Commission, or War Shipping Administration.

Use of WPB-547, WPB-541 Export Use WPB-1319

Distributors or dealers who need new equipment for inventory should extend their customers' ratings and should use Form WPB-547 to get additional inventory from producers, or form WPB-541 if they buy from distributors.

Applications for equipment for export should be made on Form WPB-1319 and such other forms as required by Priorities Regulation 9 and FEA regulations.

Outline of Paragraph 'F.' Study Carefully—It Tells When Rated Orders Are Not Required

Rated orders are not required for the following transactions, although other orders, such as L-123, may still require a rating for particular parts, such as electric motors.

1. If the repairman under CMP Regulation 9A, or Order P-126,

(Concluded on Page 15, Column 1)



When ROSIE the Riveter becomes ROSIE the Housewife...

Right now her big job is to help build airplanes that will knock the Axis off the map. As she rivets, a refrigerator, maintaining rivet temperatures at minus 10 to minus 40 degrees, is within easy reaching distance. It is filled with rivets that were first heat treated to make them soft enough to be driven satisfactorily. After quenching in water they were placed in this refrigerator to prevent their hardening and cracking when being driven.

When Rosie becomes a housewife, she will go to her quick-freeze unit, whether it be in her own home or in a public locker plant, take out some frozen *fresh* strawberries that had been quick frozen at -30° to -40° and then stored at zero to +5°. They will be the berries she put there the previous berry season. There will be other things in that quick-freezer that will help eliminate the problem of what to serve unexpected guests.

One of the important reasons for this double-duty application of low temperature refrigeration that makes possible this advance in airplane production and new comforts and conveniences in our every day existence, is an efficient, specially designed Brunner low-temperature refrigerating condensing unit.

The lessons we are learning in today's production of refrigeration units essential to the winning of the war, will be applied to good advantage in the production of efficient peacetime equipment for the home, the farm and for the food distributor. Our engineers, experts in commercial or industrial refrigeration and air conditioning, will be glad to discuss your problems. Why not write *today!*

BRUNNER MANUFACTURING COMPANY
UTICA, NEW YORK, U. S. A.

ARMY E NAVY
BRUNNER
For over 36 years the Symbol of Quality

What Revised Order L-38 Means In Terms of Production Possibilities

(Concluded from Page 14, Column 5)

merely replaces a part of substantially the same size or capacity which has become worn out or damaged beyond repair while in the purchaser's possession and if the purchaser had had it for at least 90 days, and it is for repairing a system owned or operated by a farmer or householder.

2. Delivery and receipt of farm milk coolers or a new system used therein, and the purchaser has a purchase certificate from the county rationing committee under applicable orders of the War Food Administration. A dealer may in this case apply a preference rating of AA-3 to his order to fill the farmer's order or to replace in his inventory the equipment used to fill the order. Ratings for additional inventory for a dealer must be applied for on WPB-547 from the producer or WPB-541 from the distributor.

3. Any transfer to a trustee or receiver for the benefit of creditors. Also, the return of any unused system or parts to the person from whom purchased—the equipment then remains subject to this order as new equipment.

4. A rating of AA-5 or higher is not necessary for the delivery of any insulated enclosure or parts on an order identified by the allotment symbol Z-1; however, special restrictions on the delivery of condensing units, compressors, temperature and refrigeration controls are contained in the paragraphs below, dealing with production under Priorities Regulation 25.

Manufacturers Take Particular Note of This Change in the Production Restrictions

During the calendar year starting Jan. 1, 1944, and during each subsequent calendar year, no person shall manufacture or assemble more of any "class" of any systems or parts of new systems (not including parts for maintenance or repair) as shown on Schedule A than his quota for that class.

If there is no quota for any person for any item which is followed by the figure "0" in the column headed "quotas," items marked with an asterisk may be produced to the extent necessary to fill accepted orders for items to be delivered for direct use by the government.

You Are No Longer Held To 1/16 of '40 Volume

Where a quota is given in that column for a particular item, each person's quota for that class is to be computed in terms of aggregate dollar volume (producer's sales price at the factory, exclusive of installation charges), and is the greater of the following two quantities:

(a) His dollar volume of all unfilled orders on hand rated AA-5 or higher for that class of new system or parts; or

(b) The percentage as specified in the "quotas" column of Schedule A, of the aggregate dollar volume of that class of new systems or parts produced by him during the calendar year 1940, in addition to his current production required to fill all orders for direct use by a government agency.

Repair Parts Excluded from Production Quotas

Please note that parts manufactured and assembled for maintenance and repair should not be included in the above quotas.

Additional quotas may be authorized under special provisions, such as Direction One authorizing evaporative coolers for civilian use in desert areas. Any person who wishes to produce any items of a "class" for which he has no quota or a limited quota under Schedule A may apply for permission to do so as explained in Priority Regulation 25.

Special Provisions For Additional Production Quotas

The following special restrictions apply to all production authorized under Priority Regulation 25. No person may use in the manufacture or assembly of any item on Schedule A, as authorized under Priority Regulation 25, any new condensing unit, compressor, temperature controls, except:

1. Condensing units, compressors, or controls obtained from excess stock under Priority Regulation 13, or the use of which in such production has been authorized in accordance with Direction Four to Priority Regulation 1, or

2. Condensing units, compressors, or controls bought on an order identified by the allotment symbol Z-1, assigned under PR-25, and supplied by a manufacturer, either directly, or through a dealer, jobber, or manufacturer's distribution outlet.

Please note, a dealer, jobber, or outlet must not deliver from his stock obtained by the use of a rating assigned on Form WPB-547, but must obtain the equipment only by extending the Z-1 symbol and AA-5 rating, if any, to the supplier after he has received a specific order bearing such an allotment symbol.

Be sure and study the instructions covering the use of WPB-1319—you will save a lot of time as well as the time of your customer!

Marine Refrigeration Official Pays Tribute To Service Men

436 Pacheco
San Francisco, Calif.

Editor:

You have perhaps heard how successful we have been in the delivery of refrigerated products to our armed forces overseas. Do you know that this success has in a great part been due to the patriotism of the refrigeration service man?

Our seagoing manpower could not keep up with the production of new ships. Where were we to get refrigerating engineers capable of handling this precious cargo? Since trained men with sea experience were not available appeals were made to the refrigeration service companies. The results have been heartening.

To date there has been sufficient number of men willing to leave the comfort of their homes and the higher wages of shore jobs for the less comfortable and less profitable but truly patriotic job of "delivering the goods."

Since many of these fellows are your subscribers and all of them are at least readers it would be nice if you printed a little tribute to them.

As Senior Inspector of Marine Refrigeration for the Army Transport Service in the Pacific Area I have been in a position to see and appreciate the work these fellows have done. Theirs is a proud record. C. W. HULSE

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BETTER THINGS FOR BETTER LIVING ...THROUGH CHEMISTRY

What Is Proper Home Freezing Degree, Time?

COLUMBUS, Ohio—What is the proper temperature for the quick-freezing of fruits and vegetables in a home freezer, and will such commodities frozen in the home be comparable to those processed commercially?

These questions were posed to Dr. Donald K. Tressler, one of the nation's top authorities on the preservation of foods by quick-freezing, at one of the luncheon meetings of the National Frozen Food Locker Association here last week.

Dr. Tressler answered these questions by declaring that—

(1) A temperature of 0° F. is sufficient for home freezing of fruits and vegetables IF the user does the freezing by setting small quantities of the product on the prime freezing surface, and if the refrigerating system will maintain the 0° F. temperature constantly under the load;

(2) There is no reason why home-frozen fruits and vegetables can't be nearly the same quality as those processed in commercial plants, if proper precautions are taken.

With reference to the amount of time to be taken in the freezing operation, Dr. Tressler emphasized the point that a rapid cooling down of the product after the blanching operation is more important than quick-freezing.

He gave the "time of freezing" for various products as follows (but all to be conditioned on the fact of the product being pre-cooled):

(1) Fish fillets—1 to 1½ hours.

(2) Poultry and meats—up to 24 hours.

(3) Fruits and vegetables—up to 24 hours.

Distributors, Dealers Attend Meeting



A large attendance of men from the refrigeration industry marked the conventions last week in Columbus, Ohio, of the National Frozen Food Locker Association, and the Frozen Food Manufacturers and Suppliers Association. There was a large representation of commercial refrigeration dealers from all parts of the country. Here four members of Frigidaire's distributing organization refresh themselves between sessions. Left to right: Oscar Rees, United Refrigeration Service, Columbus; Dale Ervin, Cleveland branch; Joseph Deppner, Dayton Branch, and Gordon W. Trask, Chicago branch.

How Freezing of Locally Grown Produce Can Help Operator

Dr. Tressler Points Out Opportunities and Problems In Combination Locker-Freezer Plant

By C. Dale Mericle

COLUMBUS, Ohio—Freezing and local distribution of locally grown fruits and vegetables can provide a profitable extra source of income for the locker plant, according to Dr. Donald K. Tressler, General Electric Co.'s authority on frozen foods, who addressed the sixth annual meeting of the National Frozen Food Locker Association here recently.

"In addition to retailing national brands, the operator can eliminate the middleman and make more profit if he sells local frozen products to his patrons, hotels, restaurants, and other local users," pointed out Dr. Tressler.

TOUGH COMPETITION

Declaring that the frozen food business will be really big after the war, Dr. Tressler warned the locker operators that as retailers they will face powerful competition from chain grocers and those big department stores who operate food departments. In addition, he said, much frozen food retailing may be handled through house-to-house distribution means.

"But there are three ways to profits open to the locker operator. Retailers of frozen foods will need storage space to hold their stock. New cold storage facilities are planned, but these may not reach the rural retailer. Locker operators could profitably rent wholesale storage space to these retailers.

"Another source of profit is the sale of frozen food to the locker patrons. Operators should handle a big variety of frozen foods for this trade, moreover.

"The third source of profit is to pack and freeze foods grown locally.

CITES EXISTING PLANTS

"In the south," continued Dr. Tressler, "they are promoting the combination locker and food freezing plant. In one plant I've seen the frozen food preparation and distribution is more important now than the locker storage end of the business, and some years ago I visited a plant in Decatur, Ill., which was profitably freezing and selling locally grown sweet corn."

One important factor to be considered before starting to freeze local foods for commercial distribution is the labor cost, advised Dr. Tressler. If the local labor rates in the operator's territory are lower than those of the big canneries, the operation may prove quite successful, he declared.

"It is also essential to solve the distribution problems before packing," he warned. "The operator may pack the food in the wrong size container for the market he is aiming at, or the food may not be of the right quality.

"But most important, the operator needs executive ability, adequate capital, and a good knowledge of freezing.

CALL IN EXPERTS

"Usually the average operator lacks knowledge of quantity freezing of quality products. It might be wise for operators to consult experts in the food freezing field before they start freezing their own food. Packers must be familiar with the proper grade of products, and they must have excellent controls to achieve high quality. It is advisable to test each day's pack to insure high quality, and the produce that is purchased for processing must be checked carefully for quality.

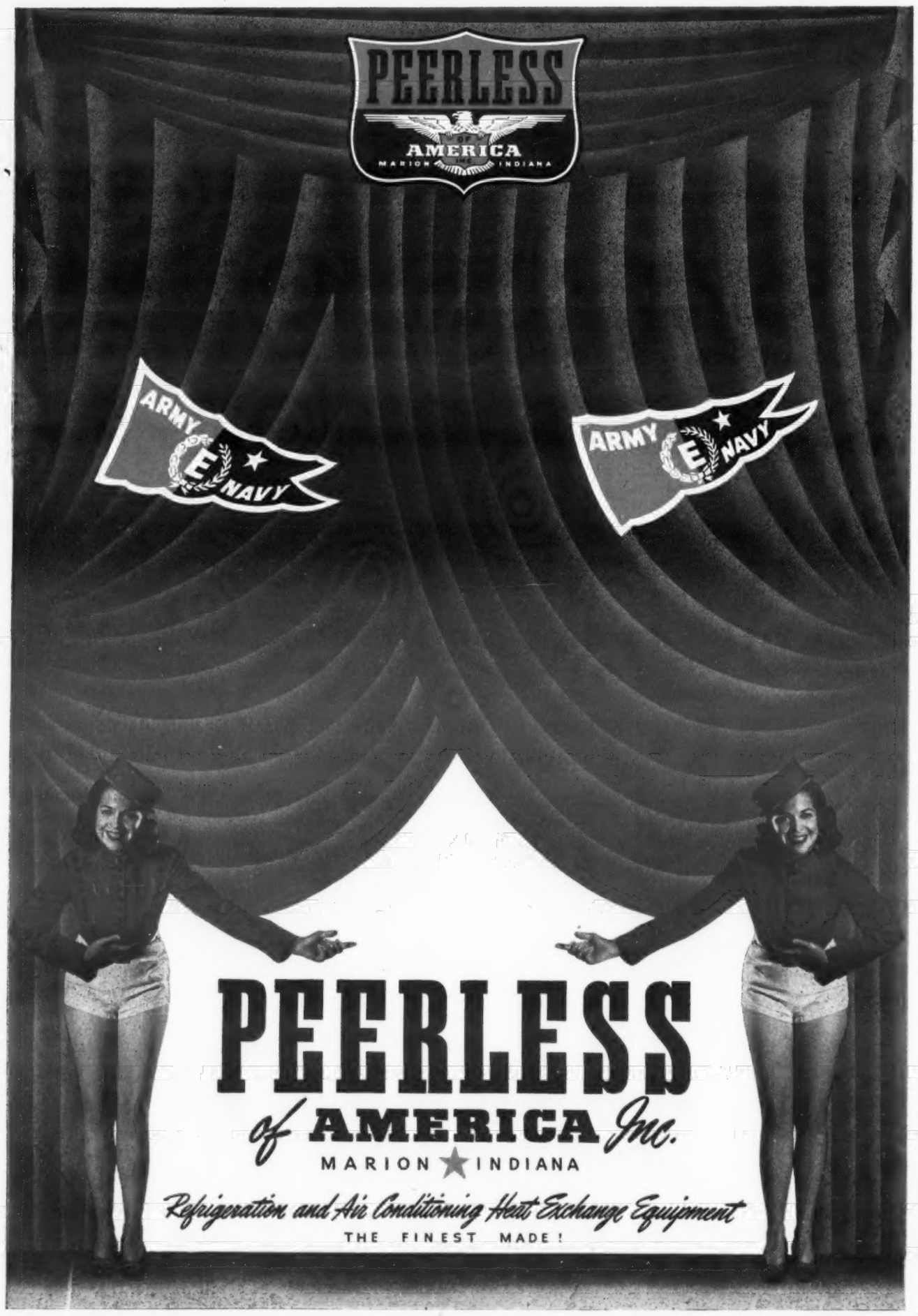
"Another important point to be reckoned with is that most big packers also operate canneries and dehydrating plants," he said. "They have to buy what their supplier, John Jones, offers, so as not to offend him and discourage him from continuing to sell produce to the plant. But if the produce John Jones offers is not good enough to freeze, it will be purchased and then canned or dehydrated instead of frozen.

REQUIREMENTS OF PLANTS

"The locker operator who plans to freeze food must have a good sanitary plant, and he must have an adequate supply of water not warmer than 60° F. for cooling fruits or vegetables. If water rates are high, this can be a large expense item," Dr. Tressler pointed out.

"The floor of the plant should be of concrete or similar material properly sloped to provide adequate drainage."

Dr. Tressler also warned the operators that the average locker plant does not have enough refrigeration equipment for a big packing operation, and declared that automatic machinery is a must to process a ton or more of food a day. And the use of much machinery also necessitates hiring a mechanic to keep this machinery in good running order, he reminded the operators.

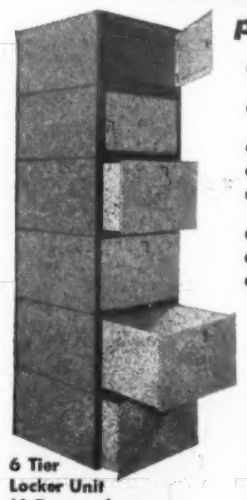


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Locker Manufacturers & Suppliers Assn. of Over 100 Members Plans New Drives

Sen. Aiken Tells Them That Concerted Action In Capital Helped Win Locker Plant Program

COLUMBUS, Ohio — Frozen Food Locker Manufacturers and Suppliers' Association now has more than 100 firms on its membership rolls, Carl Mohr of C. F. Mohr Associates, and chairman of the membership committee, reported to the association at its annual meeting here last week.

In the business meeting of the association, presided over by L. A. DeMore, Dole Refrigerating Co., president of the association, changes were made in the assessment of membership dues, and in the manner of electing directors of the association.

CHANGE IN DUES

The assessment on contractor members (those who sell and install locker storage plants in the field) was changed from a basis of 1% of total dollar volume of installations per year, to a flat fee of $100 a year for contractors installing five plants or less, and $200 for contractors installing more than five plants. Manufacturers pay a flat fee of $100 a year, and those firms classified as suppliers pay $25 per year.

The association will henceforth be guided by a nine-man board of directors, with the ninth member being the retiring president, who will hold his place on the board as president ex-officio.

The others on the board of directors of the Frozen Food Manufacturers and Suppliers Association will consist of three from the manufacturer's group who will be elected for one, two, and three year terms; four from the contractor's group, two to be elected for two years, and two for a one-year term; and one member from the supplier's group, who will hold office for a one-year term.

NEW DIRECTORS ELECTED

Directors elected to serve for the coming year were:

(Manufacturers group): J. A. Gazelle, Carrier Corp. Chicago office; Harry Quinn, Pacific Lumber Co.; J. W. Witte, Biro Mfg. Co.

(Contractors group): George Foerstner, Amana Society; John Bess, Food Locker Construction Co. of New York; L. M. Barlow, McGregor's, Inc., Memphis; Ray Farquhar, Omaha.

(Suppliers group): Neal Banter, Lindsay Box & Paper Co.; L. A. De More, Dole Refrigerating Co., serves ex-officio as the ninth member, being the retiring president of the association.

The directors elected the following officers: President, J. A. Gazelle; secretary, Ray Farquhar; treasurer, George Foerstner.

Frank admission that organized activity by the Manufacturers and Suppliers Association, together with pressure brought by local groups of operators and promoters, played a large part in getting the program for locker plants pushed through, was made by Senator George D. Aiken (Vermont), of the U. S. Senate subcommittee on Food Supply. Hearings before this committee are considered to have been instrumental in obtaining the "bank of materials" that permitted some new construction and expansion in locker plants in the last two years.

Senator Aiken said that he first became interested in locker storage plants when he was governor of Vermont, and had watched with interest the installation of the first plant in his state in 1938.

Interest in locker plants in Vermont reached a pitch in 1942, said Senator Aiken, but that was just the time that restrictions were placed on the use of materials.

HOW PRESSURE HELPED

The complaints began to pile up in Senator Aiken's office from groups back in Vermont who believed that they really had a good case for the installation of a new locker plant. Senator Aiken advised them to get hold of a man who could plead their case for them in Washington, and they selected Pete Bove, Rutland, Vt., attorney.

Mr. Bove and the local groups went into action and managed to obtain priorities for eight plants in the early summer of 1942. But priorities for locker plants gradually "dried up," and the clamor continued to grow, not only from Vermont, but from all parts of the country.

In the spring of 1943 the Manufacturers and Suppliers Association was formed, Senator Aiken recounted, and adding Mr. Bove to their forces, they sought action in Washington.

In the early part of 1943 all the material that might have been spared for locker plant expansion was going to commercial food freezing firms, but the Manufacturers and Suppliers group got the ear of the Sub-Committee on food of the U. S. Senate Agriculture Committee.

Some members of this Senate Committee were of the opinion that with Victory Gardens being so widely encouraged and the stressing of the need for preserving every possible bit of food, a fair share of any materials allotment for the creation of additional facilities for the storage of foods should be given to the locker plant field.

THE SENATE HEARINGS

So the Senate sub-committee held a hearing in June of 1943, to which were invited witnesses from the various government agencies, and witnesses provided by the Manufacturers and Suppliers group. Not too long after these meetings came the announcement of a definite program of a "bank of materials" for locker plant construction and expansion.

"One thing we did at this meeting," smiled Senator Aiken, "was to get the representatives of the various interested government agencies there all at the same time, so that there could be no passing of the buck.

"All of the Senators on the committee—and several others—showed great interest in the matter, and I think that interest was in direct proportion to the pressure that was being supplied."

The greatest of credit should be given to the government agencies for the manner in which they took hold of the program and pushed it through, Senator Aiken declared.

MEMBERS TELL WORTH

Bryce Vollmar of Master Mfg. Corp., one of the group who helped to organize the Manufacturers and Suppliers Association, traced the history of the association, and explained how the picture had changed from one of deep gloom in 1942 to a practical program of construction by the summer of 1943, chiefly because of the cooperative effort put forth.

Testimony as to the worthwhileness of the association was given by Mark Mooney of Carrier Corp. (representing the manufacturers' group) who declared that the organization was one that had accomplished some "positive" good in Washington and enabled the manufacturers to plan ahead; and John Bess of the Food Locker Construction Co. of New York (representing the contractors) who said that he couldn't be in business without the work the association was doing, and who asked for redoubled efforts to enlist more contractors from the east.

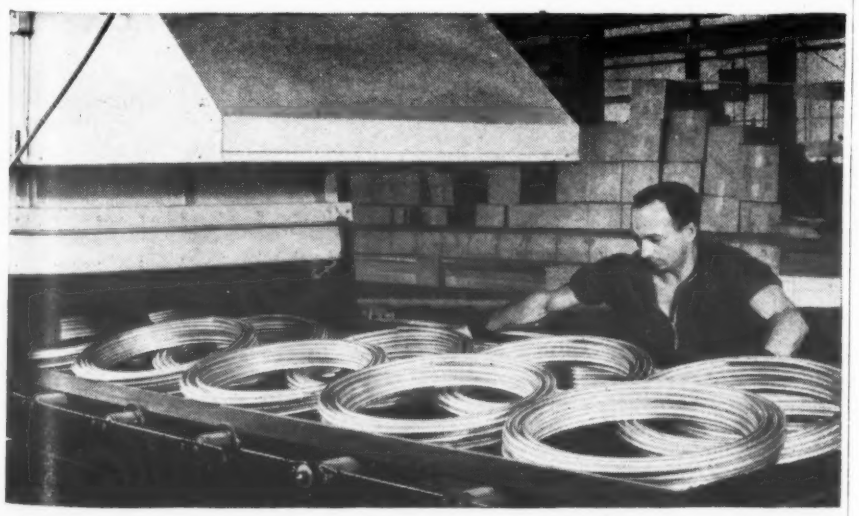
What will be the function of the Manufacturers and Suppliers Association when the wartime emergencies have ended? This question was asked and answered by Ray Farquhar, Omaha, secretary of the association.

PLANS FOR THE FUTURE

Picturing the locker plant field as probably one of the country's fastest growing industries once the restrictions are lifted, Mr. Farquhar pointed out the need for a medium to exchange ideas and to set up and hold standards.

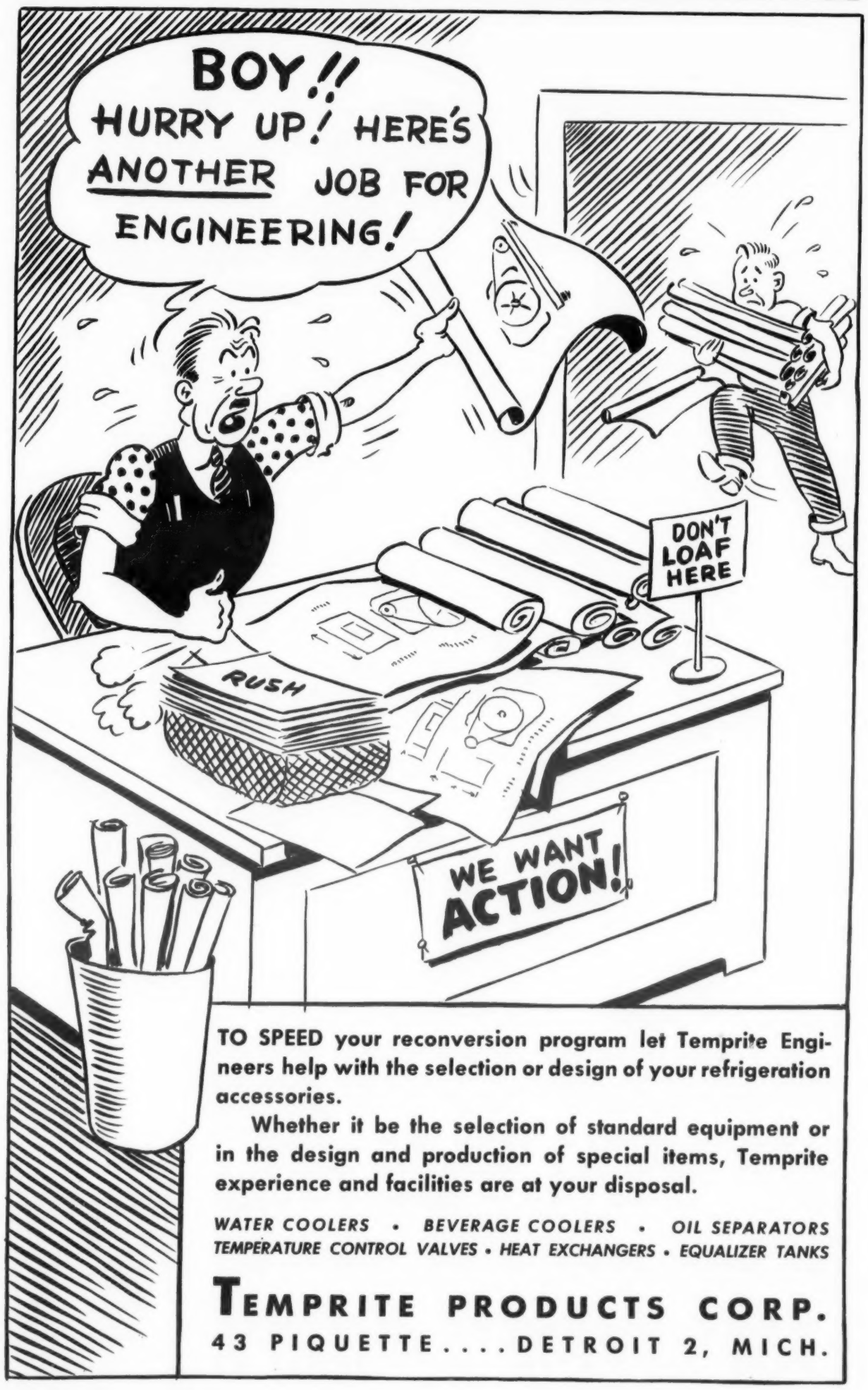
Interested parties in the east, where the expansion of the industry has been least rapid, can gain knowledge from those in the midwest who have installed many plants, while contractors in the west can pick up pointers from those in the east who have specialized in putting in plants in urban areas.

The association should chiefly direct its efforts, says Mr. Farquhar, toward getting the idea established that when a prospect wants to build a new locker plant, he should contact and make his deal with a contractor who by his membership in the association guarantees his familiarity with his job.





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Electric Leagues Given Outline of Plans of National Electrical Retailers Association

(Concluded from Page 1)

ganization by M. E. Rodger, customer sales and service member of Chicago's Middle West Service Co.

National Electrical Retailers Association was set up to act as an organization representing the interests of the independent retailer, he said—to work toward greater utility and retailer cooperation in the practical fields of planning better training methods for sales and service activity and higher standards of merchandising.

The necessity for developing plans now for tremendous postwar markets is obvious, he pointed out, but actually getting into motion is the hardest part. NERA was organized to facilitate planning and action needed by the electrical industry—a non-profit organization offering the capabilities of a financially sound, well informed group of business men.

The country's independent service operators now are handling 90% of the electrical repairs called for, Mr. Rodger cited. The service problem will continue postwar, but how many of the outlets taking up appliance retailing, he asked, will accept the responsibility of servicing the appliances they will sell?

The number of retail outlets potentially in appliance selling as far back as 1939, five years ago, was impressive even then, he stated. Listing figures from the 1940 federal census, he called attention to the following established retailers:

Hardware stores	29,000
Furniture stores	20,000
Radio and appliance	18,000
Public utilities	8,000
Department stores	4,000
Total	**79,000**

There will be many more retailers falling within these classifications after the war, he prophesied, and a much higher percentage of them actually will take part in appliance selling. Added to these will be other independent merchants who never were interested before. A comprehensive list of the different kinds that have already expressed interest in appliance franchises would include:

NEW RETAIL OUTLETS?

Automotive suppliers.
Department stores.
Drug stores.
Furniture stores.
Gas stations.
Hardware stores.
Jewelry stores.
Lumber companies.
Mail order houses.
Music stores.
Plumbing outlets.
Rubber goods houses.

How many of these will be interested in adequate wiring within the consumer's home, or in the customer's long-time satisfaction with the product itself, he asked. That responsibility eventually will fall right back where it is now—into the lap of the reputable electrical and appliance dealer.

In direct proportion to the expected degree of postwar expanded markets, he stated, increased sales personnel and selling programs must be developed. NERA's responsibility will be one of anticipating dealers' needs by working out effective management programs, window display tie-ins, and sales promotion films.

100,000 DEALERS POSTWAR?

In actual figures, the need for additional dealers postwar is 25% of their present number, he cited as a conservative estimate. It will call for 100,000 new retailers, and for 300,000 new salesman, to handle the 2½-billion-dollars worth of products to be sold.

The various electrical products will be divided in much the same proportion as those reached in 1939, he belived, and reproduced the figures of the gross electric sales for that year:

$ 300 billion	Major appliances
275 billion	Radios
220 billion	Lighting equipment
215 billion	Wiring
175 billion	Small appliances
$1,200 billion	**Total**

All these add up to an impressive job of preparation needed, Mr. Rodger concluded. It is a job which the electrical leagues and NERA together can do much toward accomplishing.

The two are in no sense competitive organizations, he pointed out. Their objectives are in large measure coincident, and indeed there is no reason why any dealer cannot belong to both, for the support of each will strengthen the other.

The subject was thrown open to general discussion by Session Chairman H. P. Wilson, and several questions were directed at Mr. Rodger from the floor. The first of these came from V. W. Hartley:

MEMBERSHIP NOT RESTRICTED

Is membership in NERA restricted to independent dealers?

No, not at all, was the answer. Any electrical retailer is eligible whether he sells electrical material or appliances.

What will be NERA's activities in such matters as price controls, profit margins, and the like, asked O. C. Small.

The NERA was conceived primarily as an organization of local units, Mr. Rodger said, interested in the dealer's problems of local market conditions, sales methods, saturation percentages, and the like. There is no intention of attempting to deal with problems occurring between manufacturers and their dealers or distributors.

QUESTIONS FUNCTIONS

The question now apparently foremost in the minds of many was voiced by R. T. King, of Trenton's Central Jersey Electric League. If NERA's interest is purely local, he said, and its function one of cooperation with dealers within any utility's area, how does it promise to be able to do any more than the electrical leagues themselves are now doing?

It doesn't, Mr. Rodger agreed. The advantage offered by NERA is only one of having utility figures and facilities at its disposal, and of being established therefore in areas where league organization hasn't yet begun, or of being able to reach dealers in more remote areas where league circulation would be relatively uneconomical.

The open forum took the discussion no farther than this, but among the small groups that mulled it over after the meeting's official closing, the feeling seemed to be that the leagues themselves were doing the job thoroughly and well, and that league growth would give the postwar field an effective service organization.

New & Retiring Presidents



E. P. ZACHMAN
Of the Cincinnati Electric Association, newly elected president of the International Association of Electrical Leagues.



W. A. RITT
Of Minneapolis' North Central Electrical Industries, who has completed a successful year at the helm of the International Association.



"BOOK OF THE MONTH"
For a Profitable Year

Shows how you can build extra business through G-E FACTORY SERVICE PLANS

Every dealer who's looking for a way to maintain a steady volume of business will want a copy of this new G-E booklet. It explains how to build extra profits through repair service.

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1. THE EXCHANGE PLAN Covers the most commonly used types of G-E fractional-horsepower motors. Makes possible immediate replacement from G-E field stocks, or from your own buffer stock. Replacement motors carry the G-E new-motor warranty, except for finish.



2. SPECIAL REPAIR SERVICE PLAN Provides for factory repair of semistandard G-E f-hp motors not covered by THE EXCHANGE PLAN, at established prices. Enables you to make quick, accurate, on-the-spot estimates. Repaired motors carry the G-E new-motor warranty, except for finish.



3. REGULAR REPAIR PLAN Covers f-hp motors not included in either of the other two plans, except extremely old or obsolete models. Inspection is made at the factory, and a cost estimate is submitted before work is started. These motors also carry the G-E new-motor warranty, except for finish. This plan rounds out this G-E service and enables you to handle repairs on practically any G-E fractional-horsepower motor.

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Investigate these proved, profitable Factory Service Plans. Like hundreds of other dealers, you'll find they're a sure way of maintaining business now; a means of building and holding trade for the postwar period. *Ask your distributor for details today.* Or, simply fill in and mail the coupon below. You'll be glad you did it!

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We have on hand a limited amount of Refrigeration type ELECTRIC MOTORS popular makes as:—Gen. Electric, Westinghouse, Wagner, Delco, Century.

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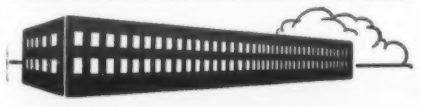
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Steel for Stoves Is Cut; 4th Quarter Program To Hold

WASHINGTON, D. C.—Allocation of carbon steel for fourth quarter production of domestic heating and cooking stoves have been reduced by 3,333 tons because of the acute shortage of that metal, the Domestic Cooking Appliance and Heating Stove Industry Advisory Committee learned at its recent meeting.

No great hardship should result, however, since the reduction will be confined principally to production of coal and wood heaters and cooking stoves, officials said. Manufacturers' inventories of this type of equipment are sufficient to permit the decrease in carbon steel allocation, they added.

Present scheduled production for the fourth quarter follows:

Cooking equipment—gas ranges, 155,000; gas hot plates, 15,000; coal and wood ranges and stoves, 91,620; fuel oil ranges, 46,050; fuel oil stoves, 40,000; fuel oil table stoves, 40,000; fuel oil trailer stoves, 3,000; combination bungalow ranges, 14,000; portable and drum ovens, 70,075.

Heating equipment—gas radiant and bathroom heaters, 100,000; gas circulators, 65,000; coal and wood caboose stoves, 2,700; coal and wood schoolroom heaters, 300; coal and wood laundry stoves, 25,000; other coal and wood stoves (magazine, wood, circulating, etc.), 100,150; sheet metal with cast iron grates, 15,000; other sheet metal stoves, 120,000; fuel oil portable heaters, 75,000; other fuel oil heaters (space heaters primarily), 51,490.

However, it is estimated that production under this program will meet only 55% of the controlled (rationing) demand for this equipment, WPB said.

In a discussion of reconversion as it will affect this industry, one committee member pointed out that many large producers of non-electric domestic cooking and heating stoves are still engaged in war production and are not producing their normal products. These producers, he explained, will be delayed in getting back into production of stoves during the reconversion period because they will not be on mill schedules for delivery of steel.

A WPB official explained that a deferred allotment procedure for obtaining steel and copper is now being considered. Under this plan a manufacturer who anticipates a cutback in his war contracts could request a "Z" allotment of material that would permit him to place his order on a mill schedule. The "Z" allotment would be shipped after regular Controlled Materials Plan quarterly allotment have been filled. This deferred allotment plan is now in effect for aluminum, it was explained. The committee unanimously recommended that this plan be extended to steel and copper.

Milwaukee Group's Trade Practices Plan Lauded by U.S. Official

MILWAUKEE — After making a study of the plan recently adopted by the Wisconsin Radio, Refrigeration & Appliance Association, of Milwaukee, covering merchandising methods to be put into effect after civilian goods are again available, Robert H. Perry, Regional Business Consultant of the Department of Commerce, made the following report covering the postwar plans of the Association:

"An example of service that is somewhat unusual is furnished by the recent action of the Wisconsin Radio Refrigeration & Appliance Association of Milwaukee. Recognizing that certain prewar trade practices have not been too desirable, this association has organized a joint committee composed of representatives from wholesale and retail groups.

"This committee has already established a broad basic postwar policy to govern the merchandising of radios, refrigerators, and other appliances, which is designed to protect the interests of the many small retailers in this field. As it gets under way, the committee will meet at regular intervals during the reconversion period to see that their jointly established policy is operating smoothly and to consider suggestions for improving its function."

Dealers May Place Orders For Ration-Free Stoves

Coal and Wood Models Are Available

WASHINGTON, D. C. — Orders may be placed now by dealers and distributors for the coal and wood heating and cooking stoves that will be certificate-free after Oct. 15, but the stoves cannot be sold or held out of stocks for the later certificate-free deliveries, the Office of Price Administration declared Sept. 28.

Action to facilitate the placing of orders by the trade in anticipation of ration-free sales was taken, OPA said, because present regulations do not permit orders to be accepted if they are not accompanied by certificates.

However, the ration form of distribution is still in effect and, therefore, stoves ordered without certificates will not be permitted to be set aside in preparation for ration-free sales.

The new provision does not apply to consumer orders, which cannot be accepted now unless accompanied by certificates.

Rather, this latest ruling will permit distributors and manufacturers to accept advance orders placed by the trade for stoves to be shipped after certificate-free transfers are permitted. This will help manufacturers schedule production to meet non-rationed demand.

OPA reminded dealers that orders for coal and wood heating and cooking stoves that they place with ration certificates through the end of October will continue to have a priority value since trade orders accepted with certificates up to that date must be shipped before non-certificate orders for the same types of stoves are filled.

Infra-Red Lamps Seen as a New Household Appliance Postwar

BLOOMFIELD, N. J.—One element of the postwar "dream world" that has likely possibility of proving an actuality is the infra-red lamp—used as a portable, rapid heating unit, believes James D. Hall, engineer of Westinghouse Electric & Mfg. Co.'s lamp division.

"Lamps operating on the same principal as those which are swiftly 'cooking' paint on tanks, jeeps, helmet liners, and other war material, can be used to dry everything in the home from fingernail polish to freshly bathed Fido.

These infra-red heat lamps also will be popular for chasing the chill out of the house during late spring and early autumn," Mr. Hall declared.

These radiant heat lamps could be used in regular lighting circuits, and, for example, clamped on the reading lamp fixture to keep the reader's neck and shoulders comfortable, points out Mr. Hall. The infra-red lamps could likewise be used around the house to protect tender plants from the cold, speed up the drying of hair and laundry indoors, and for other similar jobs, he said.

Greater industrial use for infra-red lamps is predicted. They are already employed for speedy drying of paint, foundry moulds, fusing label paint on glass bottles, baking insulating varnish on electrical equipment and similar operations.

Banks of infra-red lamps on auto-Banks of infra-red lamps on automobile assembly lines could cut the prewar 50-minute paint drying time to five or six minutes, predicts Mr. Hall.

Radiant heat emitted by these lamps is the secret of the quick drying action. Unlike convection and conduction heating, radiant heat is concentrated on the object to be heated, rather than heating intervening air space or water, if the latter is used as the heat transfer medium.



"All I Want Is A Bendix," say millions of women! They're fighting, kicking, pushing, to be first in line when those gleaming new Bendix Automatic Home Laundries again come rolling off the production line! That's why the Bendix dealer is set for a selling spree without parallel in home appliance history. Already more women want to buy the one-and-only Bendix than the 5 next most popular washers combined! Right now, even more women are hearing the Bendix story—on the air—and in Life, McCall's, Parents, True Story, Better Homes & Gardens, American Weekly, Good Housekeeping and 23 Sunday newspaper supplements, week after week, month after month!

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G. I. Joe Will Be A Great Customer

ENTHUSIASTS on the subject of frozen foods like to point toward the millions of servicemen's wives who are married—and frequently mothers—but who have never set up housekeeping.

These enthusiasts say that not in all the history recorded of marketing has there been such an opportunity for pioneering in new forms of food distribution.

They believe that just as the canned foods industry received its great impetus following the last World War, so will the frozen foods business make its seven-league-boots strides after the end of this much bigger one.

It's not only a matter of inculating new, easy habits among these novice wives. It's also a matter of knowing that Mr. and Mrs. G. I. Joe will have an extraordinarily favorable cash position.

NEWLYWEDS WILL HAVE TREMENDOUS CASH RESERVE

Perhaps never in the history of cohabitation will so many newly set-up homes have so much cash at the outset. The boys will want their practically-brand-new wives to have the time and freedom to play with them and enjoy a full life.

And they will be able to afford the original cash outlay required for labor-saving home equipment and the regular use of frozen, prepared foods and meals. The combination is a "natural."

Any way you look at it, returned servicemen will have unprecedented purchasing power. Conservative politicians aver that at least 30 billions of dollars will be voted in veteran's benefits. THIRTY BILLIONS! That's staggering. But it will come, you can be sure, and probably more!

Right now they are talking about a bonus of $3 per day spent in service, with an additional dollar for every day spent overseas, and possibly an extra dollar for time in combat duty. Since this is such a long war, the total bonus for hundreds of thousands may run past $4,000, and could average $2,500.

Added to the bonus will be pensions, not only for veterans but for their widows and children, till Kingdom Come. Of course this will keep taxes high, but it will also add to the stream of purchasing power.

Furthermore, these boys are entitled to their old jobs back, which means that they will be *employed* (large numbers of others may not be). Thus they'll have a steady income, and be good prospects for appliance sales.

GOV'T WILL HELP FINANCE VETERANS' BUSINESS VENTURES

Manufacturers who are seeking extension of their distributive outlets will note that veterans may apply for loans with no limit as to amount, save that the government will guarantee only $2,000 of the total, or 50%, whichever is less. Moreover, the interest on such loans shall not exceed 4%.

This is sufficient to set up hundreds of thousands in a retail or service business. Many thousands will want to take advantage of this unprecedented head-start (as manufacturers can testify, after reading their mail from ambitious G.I. Joe's).

Some experts go so far as to predict that 2,000,000 returning veterans will want to go into business for themselves, and that they would be working on a total government-guaranteed loan of more than $4,000,000.

This is quite a sum, and will make quite an unprecedented economic situation. (It should be noted that no collateral will be needed.) Although modest, the loan limits confine the possibilities to very small business—such as retail stores and service shops.

MANY SOLDIERS HAVE LARGE SAVINGS TO INVEST

(This government-supplied capital will often be augmented by the very considerable savings many servicemen will have. Those who have been at sea or abroad, with little opportunity to spend any money at all, and often with working wives at home, may have saved several thousand dollars before they are discharged—something also unprecedented in economic history when applied on so large a scale.)

Furthermore, large numbers of these men will have been trained at government expense as mechanics of all sorts, training which will be invaluable to them as appliance dealers or service men. Others will have had excellent training as managers.

Inasmuch as the appliance business has so many optimistic portents, and since further the mortality rate among appliance dealers has been high during the war (perhaps as high as 40% at war's end), here indeed is a golden field for the returned veterans. And, further, it may profitably be cultivated—and guided—by manufacturers and distributors.

NOT ALL THE ATTEMPTS WILL PROVE SUCCESSFUL

The failure rate will no doubt be high, despite the prestige of the returned fighter, and the easy sales he will be able to make to other servicemen and relatives and friends for the first year or two. Nevertheless, out of the multiude will come a number of retail firms which will strongly entrench themselves, and permanently enrich the industry.

Air conditioning manufacturers, please note.

Another interesting angle is the educational opportunity afforded veterans. Tuition up to $500 per year will be paid to any school, plus $50 per month for subsistence, or $75 per month if the veteran-scholar has dependents. This, for the serviceman with only 90 days served in uniform. He can go to school longer—up to four years—according to the length of his period in service.

VETS MAY BRING BOOM TO COLLEGE COMMUNITIES

From one to five million veterans are expected to take advantage of this extraordinary offer.

This means that communities in which technical schools and colleges are located will have the boom of their lives. Market analysts should take this into account in their studies.

It also means that business, after a recessionary period of scarcity of trained young men to draw from, can depend on a tremendous supply of talent for replenishment of human resources.

For the less ambitious, veterans will receive an allowance of $20 a week for the time they do not choose to work—or cannot find employment.

Nothing in the way of "socialized expenditures" that Brother Townsend, Huey Long, Harold Laski, Harry Hopkins, or Henry Wallace ever dreamed of in their daffiest moods could compare with the outpouring of money for veterans which will follow the end of this war.

It is not a matter to be viewed with alarm. Nobody will begrudge a cent of it to the boys. But serious-minded business men do know that an obligation is attached—an obligation to push the national income high enough to make these enormous payments without impairing the credit or capital structure of the nation.

HERE'S ONE WAY OUT OF OUR DILEMMA

Even though it does sound a bit like lifting ourselves by our bootstraps, one way out of our dilemma is to concentrate diligently on the merchandising of better living to these recipients of benefits, and their families.

As we teach them to enjoy labor-saving devices and products, so shall we elevate their standards of living toward a point where they will want to *produce* in order to continue living so well.

And when that point is reached, America, with her extraordinary system of great freedom through great enterprise, will be safe for another hundred years.

"Free enterprise" is a system of free men demonstrating enterprise, and for our future continuance of that unprecedented successful system, the enlistment of returned servicemen in the "cause" is the prime hope and promise.

They'll Do It Every Time

By Jimmy Hatlo



LETTERS

40 MORE REPAIRMEN TO LEARN JUST 'WHAT IT TAKES'

Pioneer Ice Cream Division
The Borden Co.
126 East 131st St.
New York City, N. Y.

Editor:

Might also add at this time that I believe the article on "What It Takes to be a Refrigeration Service Man," is exceptionally good and it is my intention to see that approximately 40 of our service men will see these questions.

W. R. COPELAND, Supt.

Data Given on Spot Procedure Authorizations

WASHINGTON, D. C. — Reports reaching WPB indicate that the manufacture of $26,055,000 of civilian goods between now and Sept. 30, 1945, has been authorized under the spot procedure contained in Priorities Regulation No. 25.

This information is contained in a report of the Controller Division as of Sept. 22, and covers only 108 authorizations on which the Division had information at that time.

Reports received from field offices indicate that a total of 1,506 applications had been filed under the procedure through Sept. 14, 1944. On that date, 124 applications had been approved. Eighteen applications had been denied because of adverse War Manpower Commission decisions, while 245 had been denied or rejected for other reasons. The remainder of the applications are still being processed.

The Controller Division report indicates that manufacture of the following items has been authorized: Automotive replacement parts and maintenance equipment, electrical conduit equipment, fabricated wire products, metal building products (other than sheet metal), copper and bronze powders, metal office furniture, domestic electric vacuum cleaners, miscellaneous kitchen and household aluminum ware, portable incandescent lamps, innerspring mattresses, dual sleeping equipment, metal beds, bicycles, metal household furniture, domestic electrical cooking and heating appliances, power lawn mowers, commercial fishing equipment, cutlery, plated silverware, pens and pencils, harvesting machinery, dairy and poultry equipment, industrial air conditioning equipment, tobacco manufacturing equipment, domestic cooking and heating stoves (not electric), plumbing sanitary ware, domestic oil burners, domestic hot water heaters, domestic and industrial gas heaters, tire patches, blue printing and photostating equipment and lithographing equipment.

Field offices have authorized the use of 321 tons of carbon steel, 4,200 pounds of brass mill products, 750 pounds of copper and copper base alloy foundry products, 1,513,479 pounds of aluminum for the manufacture of these products, according to the Controller Division's report. Persons who will make civilian products under the 108 authorizations covered the report expect to hire 689 additional employes to carry on their production.

Manpower Controls Lifted For Veterans

WASHINGTON, D. C.—All manpower controls for veterans of the present war returning to civilian life have been lifted.

The War Manpower Commission has announced that these veterans need no longer follow the restrictions clamped on other workers because of the stringent needs of war production. It is believed that close to 1.5 million workers who are veterans will be affected.

With relaxation of these rules, veterans of this war will no longer have to obtain statements of availability to change jobs, nor to follow the compulsory referral system, nor accept jobs in order of essentiality as provided by the U. S. Employment Service, nor be hired in conformity with employment ceilings set for various companies.

The War Manpower Commission emphasized that any veteran applying for assistance in seeking a job through the U.S.E.S. will be given help, but that he need not conform to the compulsory referral program of U.S.E.S.

Employers who have hired their allowable quota of workers may hire veterans without regard to their ceiling, but they will be limited, nevertheless, with regard to all other workers. Thus, an employer whose ceiling is 10 workers, may hire a veteran of the present war, but if a non-veteran should then leave his employ he would be unable to hire another worker (except a veteran) until his force fell below his stated ceiling.

No Demand, Order on Dehydrators Revoked; 24,000 Produced

WASHINGTON, D. C.—Limitation Order L-308, issued July 8, 1943, to control and schedule the production of domestic food dehydrators, has been revoked, WPB announced Sept. 29.

Twenty-seven manufacturers were authorized to make food dehydrators under the order. About 24,000 dehydrators were made before production authorizations expired Sept. 1, 1943.

Further authorizations were not issued after that date since consumer demand was lacking.

United Distributors Takes Admiral Line

BOSTON—Appointment of United Distributors, Inc., as distributor of Admiral radios, refrigerators, electric ranges, and home freezers for the Boston trading area and part of Vermont, was announced last week by Ross D. Siragusa, president of Admiral Corp.

United Distributors was organized in August, 1937, by Joseph Mass, president, and Nicholas Mercurio, Jr., assistant treasurer and secretary.

John B. Zumwalt, Sr., former New England district sales manager for the Crosley Corp., will head up the appliance division of the United Distributors firm as vice president and general manager.

Gilmer BELTS

Air conditioning and refrigeration are essential to much of America's war production. That means that the belts so important to such equipment must be rugged, long-lived, and efficient.

Gilmer Belts are real sales getters in this field, and dealers who stock them are bound to do a tidy service business. Don't miss this chance while it's really hot. Get hold of your Gilmer jobber today.

L. H. GILMER COMPANY
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Dependability doesn't happen...

IT'S *BUILT INTO* EVERY A-P VALVE



A-P MODEL 207
THERMOSTATIC EXPANSION VALVE

The versatility, dependable refrigerant control efficiency, compact size, durability, ease of inspection, and other advantages have made A-P Model 207 one of the most popular valves among Refrigeration Service Engineers responsible for thousands of installations. Adaptable to smaller types of units, display cases, ice cream cabinets, sharp freezers, and air conditioning units, it maintains a constant superheat over a wide range of evaporator temperatures. Superheat is readily adjustable from 0° to 30° F. Capacity, from ¼ ton Freon to 1 ton Methyl or Sulphur. Write for complete bulletin and service data.

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STOCKED AND SOLD BY PROGRESSIVE REFRIGERATION JOBBERS EVERYWHERE —
RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

Commercial Refrigeration Group Gets WPB Slant on Reconversion Problems

Editor's Note: The following excerpts from the official WPB report of the August meeting of the General Refrigeration and Air Conditioning Industry Advisory Committee, just made available, are published for the benefit of readers who may not otherwise have access to the thinking and planning of the government agencies as is often revealed in these reports.

Industry Advisory Committees

C. H. Monsees of the Office of Industry Advisory Committees read copies of letters recently interchanged between Attorney General Biddle and Mr. John Lord O'Brian, General Counsel for WPB, in which the Attorney General states that consultation by WPB with Industry Advisory Committees on demobilization and reconversion problems, while hostilities continue, does not constitute violation of the antitrust laws, as long as members do not determine policies, or get together privately and reach an agreed position before consultation.

L-341

Mr. R. C. Hanna (General Industrial Equipment Division) said that the new restrictions on ordering commercial motors arose because of the steadily increasing excess of backlogs over production, together with the impossibility of determining end use (since motors are a B product) and WPB's conviction that many motors are being ordered unnecessarily. The purpose of the order, therefore, is to match the demand with the supply by obtaining realistic requirements and screening applications.

The General Industrial Equipment Division has tried to make the application form as simple as possible, Mr. Hanna said. Purchasers of more than 450 fractional or 75 integral horsepower motors per quarter (dealers excluded) must apply on WPB-3825 for permission to receive motors they have ordered or are ordering in advance.

In filling out the form, the applicant is to identify the motors by horsepower and speed, though he is not to break down the list to show current characteristics; for each rating, he is to give his usage pattern and inventory, the name of the supplier, and the delivery pattern asked and promised. If one sheet is insufficient for an application, he may use a separate sheet for individual suppliers or for each motor rating. The General Industrial Equipment Division will accept estimates quoted in dollar value if forecasts of end-product demand by units cannot be made, as in the case of multiple-product companies.

Unless his application is returned with written notice to the contrary, the applicant may continue to receive all motors which he has ordered and may continue to place his orders in advance to the extent permitted by regulations other than L-341. Mr. Hanna assured the committee that the General Industrial Equipment Division will not make modifications in quantities of motors requested by refrigerator equipment manufacturers without consulting the refrigeration and AC section as to the reasonableness of the requirements.

War Food Administration Programs

Mr. J. W. Millard (Office of Materials and Facilities, WFA) told the committee that, according to July 1, 1944 figures, 85% of the space in coolers and 87% in freezers was occupied by food stored by governmental and commercial holders, whereas before the war these holders used no more than 50%. The 1944 movement of food into cold storage has just begun; and while substantial savings in space have been made through increased utilization and efficiency and through the use of natural caves in some sections of the country, it appears that an absolute minimum of 8,000,000 feet of additional space is required.

The WFA expansion program, some of which has already been approved, covers public cold storage facilities and does not include any for the exclusive use of the armed forces, Mr. Millard said.

Mr. Millard spoke of the very critical shortages in ice manufacture which have existed in the South and the East. He said that expansion of such facilities is definitely being planned, though the size of the program has not yet been settled.

Contrary to the common impression, Mr. Millard stated, there is not actually a ban on the increase of freezer storage space. The criterion used by WFA is the best use of a given amount of material and labor to produce the greatest contribution to the needs of the area in question.

Office of Civilian Requirements Programs

Dr. William Y. Elliott (Vice Chairman, Office of Civilian Requirements) envisioned the country's greatest problem, when war production ceases to be necessary, as that of reconverting to civilian production with the most speed and the least waste motion. Furthermore, it is advisable to smooth this process by preparing for it now and beginning the transition wherever possible, he said.

The two factors of essentiality which OCR will use as a gauge for the recommencement of civilian production will be (1) the capacity of the industry to absorb unemployed workers in the post-war period, and (2) the need for the product in terms of both the wartime economy and its common usefulness.

Dr. Elliott explained that, all other things being equal, the production of a complicated item having many parts and requiring many man-hours of assembly time would be favored over that of a simple item which could be stamped out of one piece of metal and quickly finished.

Dr. Elliott stressed the importance of the Division's and the Industry Advisory Committee's establishing the need for the industry's products in such a way that actual requirements can be justified and material and components sought for them on a supplementary program.

He suggested that information be furnished on the following points:

(1) production figures of the item and the known inventories in relation to demand;

(2) the necessity of the item for the maintenance of the health and morale of the civilian population, together with the probable effect on absenteeism;

(3) the degree to which production of the particular item would aid employment; and

(4) a consideration of comparative labor areas in which it might be manufactured. Committeemen asked that the Division communicate with large advertisers, as their advertising agencies have all of this material on file from surveys which have already been made.

When industry representatives pointed out the dependence of civilian production on materials and components, especially small motors, Dr. Elliott replied that materials, if not obtainable from idle and excess stocks, could be obtained on deferred allotments under the new "spot authorization" plan (PR-25); he thought that beyond streamlining the demand for motors, as is now being done, plentitude of supply depends on whether a cut-back in aircraft production will release the facilities needed for motors of commercial types and sizes.

Manpower Problems

Arthur L. Korn (Labor Production Division) spoke on the Byrnes directive of Aug. 4, 1944, which extends manpower controls to No. 3 and 4 areas, as well as to No. 1 and 2 areas, and provides measures to enforce compliance. No production is to be authorized without the approval of the Area Production Urgency Committee. To establish essentiality of production, Mr. Korn advised manufacturers to explain and justify their projects with their local WPB officials and the management members of the Management-Labor Committees.

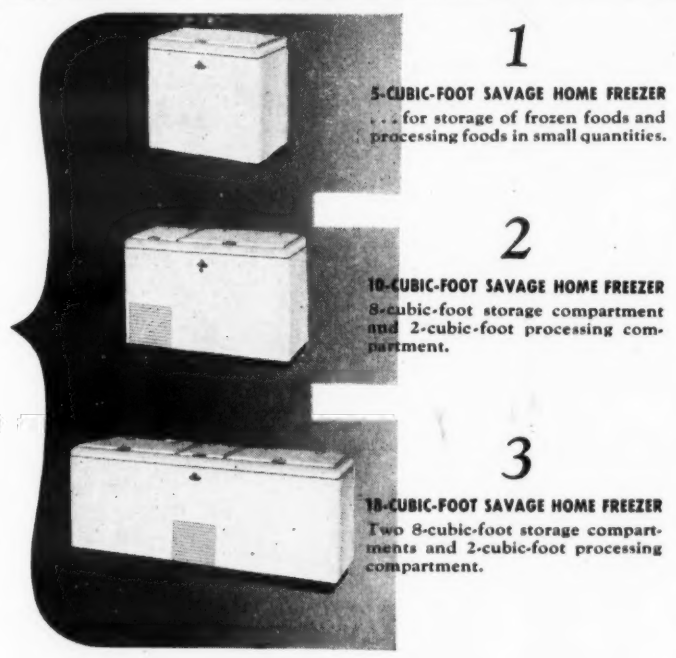
Committeemen said that the new regulations have aggravated absenteeism and the difficulty of hiring workers. Men from farms, particularly, who are accustomed to working in town during the winter and going back to their farms during the summer, have been inhibited by the new regulations from accepting factory work because of the widespread impression that they will not be able to leave such work. Mr. Korn advises a thorough educational campaign to inform people in farming sections that no realese is necessary in leaving a job to return to their farms.

Industry representatives also told

(Concluded on Page 23, Column 1)

SAVAGE FOUND OUT . .

your customers want these practical sizes



Savage found out, first, in a study of what the public wants, that the home freezing and storage needs of most families will be best served by units in the three capacity-sizes shown above.

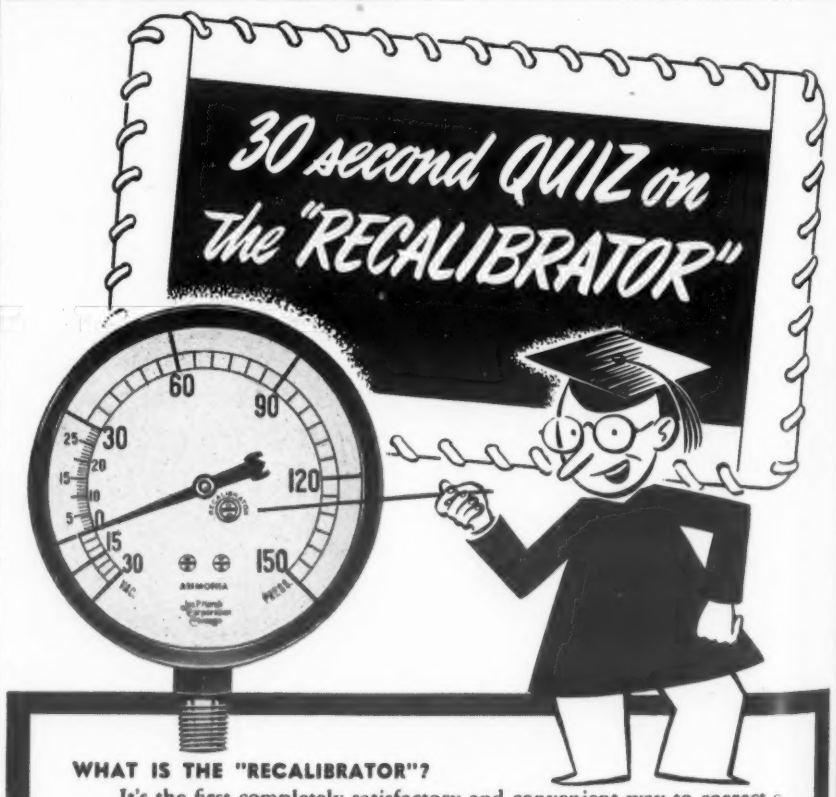
Then Savage, with its 19 years' experience in the ice cream cabinet field, set to work to build its line of Home Freezers, attractive in appearance and designed for practical use in the home, with years of dependable service built into every detail of construction.

Savage Home Freezers, backed by ample resources, large production facilities and top-flight engineering skill, are styled and built to *sell profitably,* offering unusual opportunities to distributors and dealers.

Savage Arms Corporation • Utica, N. Y.
Refrigeration Division



Send for illustrated literature which gives "Nine Reasons Why Savage Offers Unusual Sales & Profit Opportunities."



WHAT IS THE "RECALIBRATOR"?
It's the first completely satisfactory and convenient way to correct a gauge that has been knocked out of adjustment. (Any gauge can be.)

ISN'T IT JUST ANOTHER "ADJUSTMENT"?
No sir. The "Recalibrator" doesn't merely attempt to compensate for the error. It re-establishes proper relation between bourdon tube and movement—actually recalibrates the gauge throughout its range.

DOES IT MAKE THE GAUGE COMPLETELY ACCURATE AGAIN?
Right—at all points on the scale.

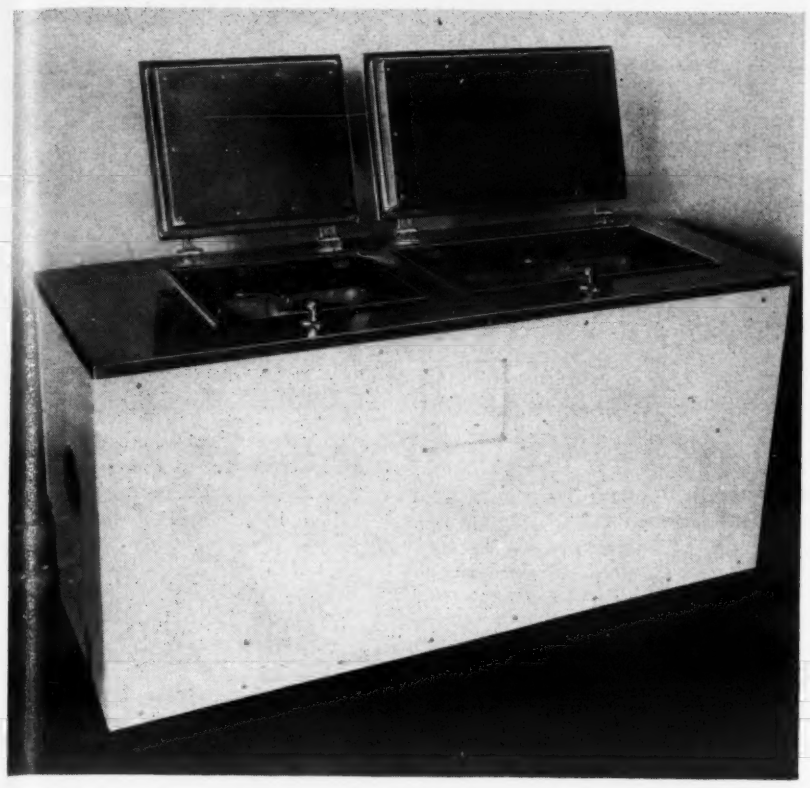
IS THIS CORRECTION EASY TO MAKE?
Simply turn that screw on the dial until the pointer is at zero when not under pressure. Almost quicker than you can say the word "Recalibrator", the job is done.

WHAT GAUGES OFFER THE "RECALIBRATOR"?
The "Recalibrator" is available in all Marsh Gauges; standard in all Marsh Dial Thermometers. It's the mark of an instrument that has behind it more than 75 years of gauge-making experience.

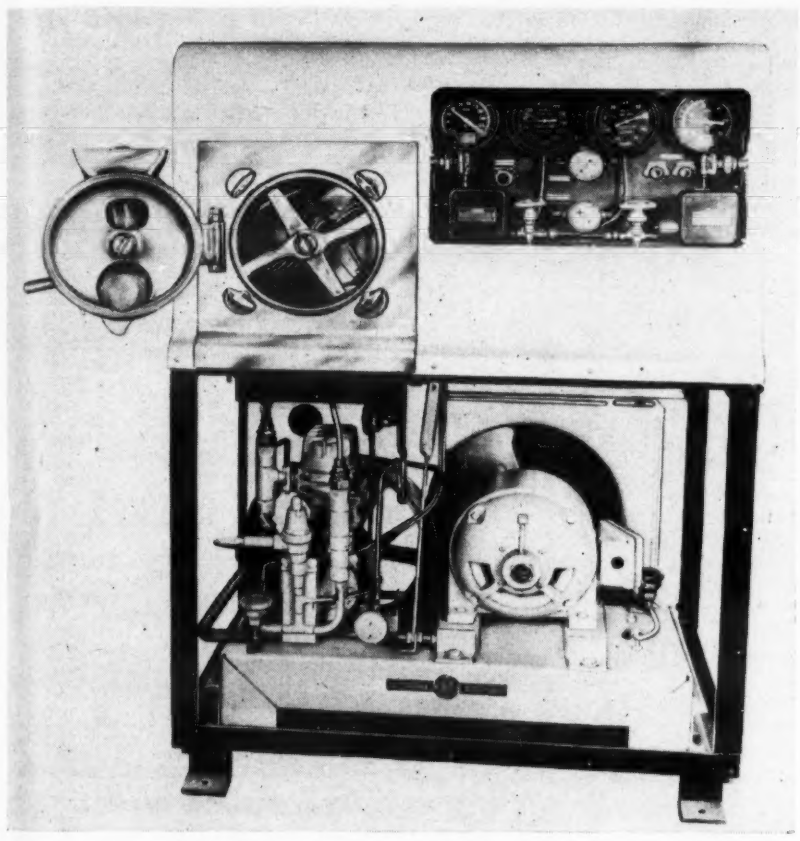
JAS. P. MARSH CORP., 2067 Southport Avenue, Chicago 14, Illinois

MARSH *Refrigeration Instruments*

More Sailors Will Eat Ice Cream



Used in conjunction with the 2½ gallon ice cream freezer and condensing unit developed jointly by Bastian-Blessing Co., General Electric Co., and the Bureau of Ships, this ice cream hardening and dispensing cabinet has been ordered by U. S. Navy for installation on most of its combat vessels.



Here is the ice cream freezer and condensing unit, which cools both freezer and hardening cabinet. Panels have been removed to reveal installation of the condensing unit.

Bastian-Blessing and G-E Develop New Ice Cream Freezer-Cabinet for U.S. Navy

BLOOMFIELD, N. J.—Sailors on some of the larger vessels of the U. S. Navy have for many years been able to enjoy a chocolate malted or a dish of ice cream no matter where they happened to be. This inclusion of a bit of the hometown drug store or ice cream parlor in fighting ships has proved so popular that the Navy has embarked on a program of providing ice cream making equipment for practically all of its combat vessels.

The first unit in a large order for ice cream freezers and combination hardening and dispensing cabinets was demonstrated recently before U. S. Navy officials by representatives of the Bastian-Blessing Co. and General Electric Co.'s Air Conditioning and Commercial Refrigeration Divisions, who together with the Bureau of Ships developed the new type of equipment for the Navy.

Bastian-Blessing is building the freezers and cabinets and G-E is supplying refrigeration equipment.

The equipment for each ship consists of a compact freezer section and a combination hardening and dispensing unit. The freezer section has a 2½ gallon horizontal batch freezer, a gage board, and a G-E Type CM-54D, 2-hp., air-cooled marine condensing unit.

Condensing unit serves both the freezer and the hardening and dispensing cabinet; a two-speed motor permitting operation at half speed when the freezer is not used.

The combination cabinet has a 30-gallon hardening section, which is held at -15° F., and a 20-gallon dispensing section held at 5° F.

Krug Completes Staff At WPB Headquarters

WASHINGTON, D. C.—Appointment of John D. Small as executive officer in the Office of the Chairman of the War Production Board completes the "top-side" reorganization of WPB, announces J. A. Krug, chairman.

Previous Krug appointments included Arthur H. Bunker as chief of staff and Hiland G. Batcheller as chief of operations "as steps in streamlining the WPB organization to deal with reconversion," it was announced.

Mr. Small was graduated from Annapolis in 1915 and served in the U. S. Navy until 1926 when he transferred to the Naval Reserve. From 1926 until 1934 he was vice president and general manager of the Dry Ice Corp. of America. In 1942 he was recalled to active duty in the Navy's Office of Procurement.

Commercial Refrigeration Advisory Committee Gets Reconversion Slants

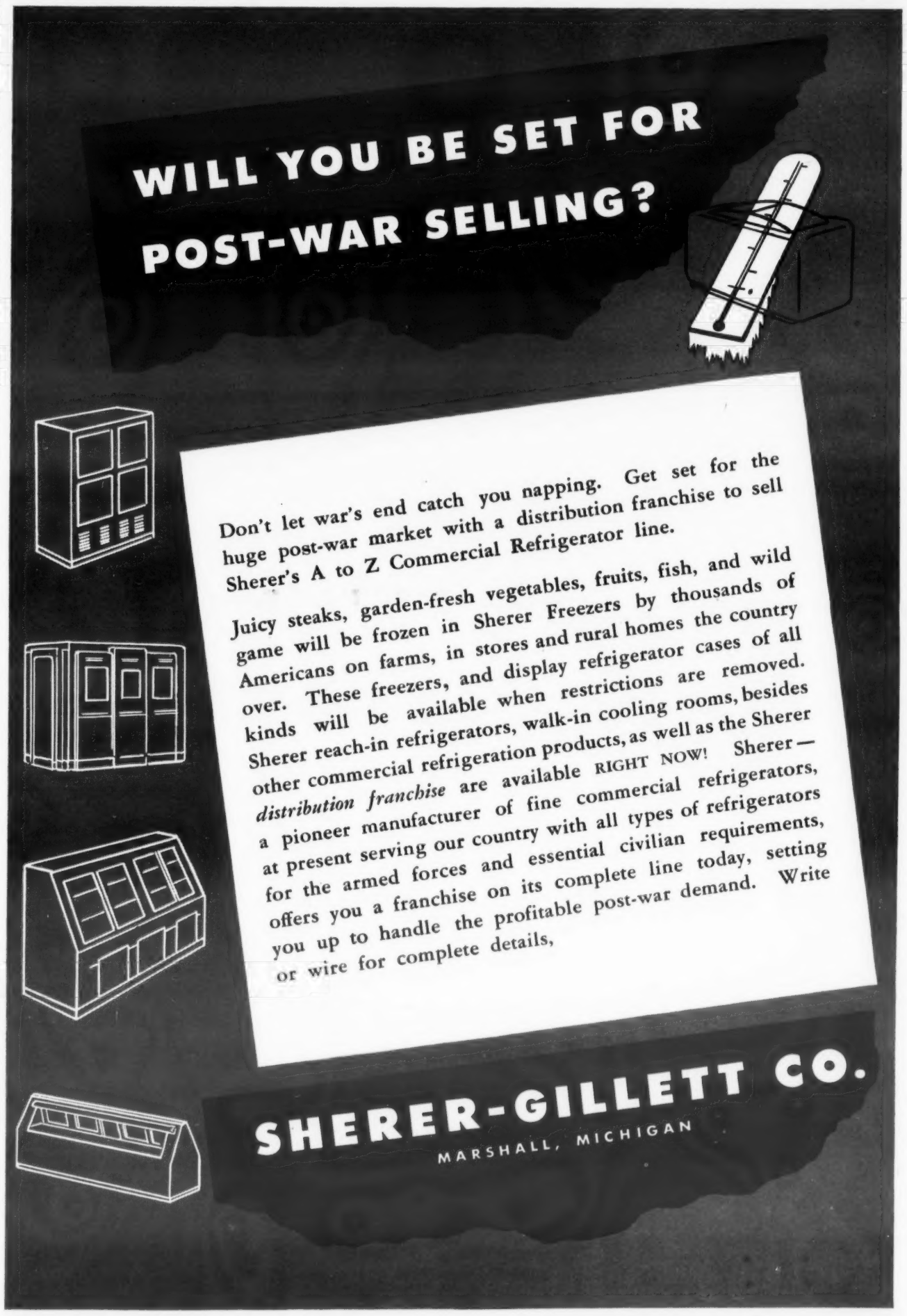
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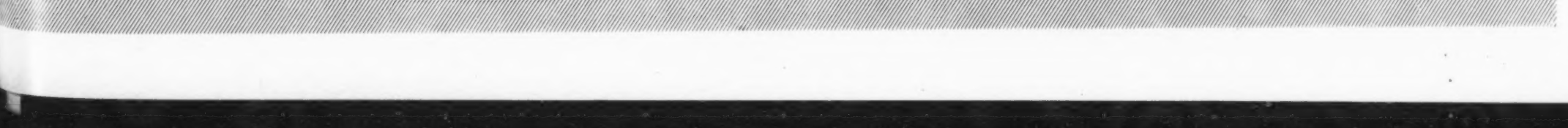
of a mysterious evaporation of labor which is taking place since the new regulations went into effect. The previous known supply of workers available for referrals has dwindled, and workers who are released do not apply to the USES; in one case which was cited, 400 workers were released by the closing of a war plant after cancellation of its contracts, but only 32 of the 400 cleared through the USES. The statement was made by one of the committee that those companies which follow the regulations are penalized.

Cylinder Crisis

A small crisis appears to be approaching in the return of 25-pound refrigerant gas cylinders. A campaign is being conducted to speed up the return of these cylinders, and a few hundred are on order. It has been suggested, Mr. Millham said, that systems be filled up and gas cylinders returned to the producers during the winter lull, to avoid a badly congested peak demand next spring.

Committeemen believed this a good suggestion; they also suggested that the Division investigate the availability of cylinders from Service surpluses, and the possibility of their being bought by the producer and sold filled with "Freon" to users of this refrigerant. Mr. Millham said that the Division would look into the matter.





Heat Pump Advocated To Help Utilities Balance Winter Drop In Cooling Load

WASHINGTON, D. C.—With the tremendous rise in air conditioning sales volume that is expected soon after the war, many utility organizations will need additional winter loads to compensate for the summer peaks created by the cooling equipment, in the opinion of J. S. Bartlett, managing director of the Electric Institute of Washington.

To establish a favorable load balance throughout the year manufacturers of cooling equipment should give consideration to the development and use of "reverse cycle" heating, which utilizes refrigeration equipment for at least a partial source of winter heat, Mr. Bartlett believes.

Installation of air conditioning in thousands of residences will serve to increase the annual peak system load, which now occurs for many utilities in summer, Mr. Bartlett points out. In the western states, for example, utilities providing power for irrigation reach their peak load position during the summer months. If thousands of additional horsepower are added to the utility lines in these areas, the expenditure of millions of dollars for additional generating capacity might be required, and this capacity if utilized for only two or three months out of the year would not be profitable for the utilities. Therefore, provision should be made to use this power during the winter months.

Mr. Bartlett points out that most domestic appliances, such as refrigerators, electric ranges, toasters, washers, and vacuum cleaners, are used 12 months out of the year.

When a home is equipped with a forced air heating system, the same fan may be used for winter heating and summer cooling, again creating a year-around load. While a certain amount of winter load is provided by oil burners, stockers, and other automatic heating equipment, it will not be anywhere near enough to offset the additional summer load that is expected from year-around air conditioning.

To meet this situation, and make the installation of additional generating equipment profitable to the utilities, the use of reverse cycle heating should be encouraged, Mr. Bartlett believes. Recognizing the limitations of such equipment as a source of winter heating, Mr. Bartlett feels that it could be used to heat residences and other buildings during periods when the outdoor temperature is above 50°. When the temperature goes below this point the automatic heating equipment would take over.

"It is obvious that in the northern parts of the country the heat generated by a 3-hp. residential cooling system would not be sufficient to heat the building, particularly when the weather was cold outdoors, and an air-cooled system was in operation. While water-cooled systems would not present this problem of temperature differential, they would probably not have sufficient capacity to heat the residence during extremely cold weather," Mr. Bartlett said.

"Reverse cycle heating could, however, be used throughout the south, and at outside temperatures above 50° in most northern areas without too great a change in equipment design. In this way the entire capacity of the air conditioning system could be utilized throughout a much longer period during the year, and thus the load would be of much greater interest to many utilities whose annual peak load occurs in the summer."

Admiral Maps Campaign Of Nat'l Advertising

CHICAGO — Seymour Mintz, advertising and publicity director of Admiral Corp., announced last week that plans for a national publication and newspaper campaign for 1945 have been approved. *Women's Home Companion, American Magazine,* and *True Story Magazine* have been added to the list of magazines to carry the Admiral campaign for 1945. This list of magazines together with those being used at the present time bring the total to eight leading magazines.

The newspaper campaign will run in 70 papers, and seven farm and 14 trade publications will also carry Admiral advertisements. Outdoor posters will be used in major cities, also.

I. C. I. Science Group Considers Program



Meeting under the direction of Dr. Willis H. Carrier (extreme right) and L. N. Hunter (next to Dr. Carrier) the Science Committee of Indoor Climate Institute made tentative plans for future activities. Participating were Prof. L. E. Seeley, D. C. Seitz, Robert K. Thulman, Cyril Tasker, Hugh T. Porter, and others.

* * *

I. C. I. Group Considers Science 'News Bureau'

DETROIT — Because public announcements of experimental industrial developments and research discoveries of engineers and scientists frequently leads newspaper and magazine readers to expect to find "miracles of the future on sale today," the Science Committee of the Indoor Climate Institute is considering establishing a "news bureau" to disseminate and qualify scientific information for both technical and non-technical publications.

The committee met here during the recent I.C.I. forum with Dr. Willis H. Carrier of Carrier Corp. as chairman, and L. N. Hunter, vice president in charge of research of the National Radiator Co., as vice chairman.

Citing two recent developments in the heating field which attained wide publicity in the popular press—namely the gasoline heater used in airplanes, and the new method of burning anthracite—committee members declared that numerous consumers immediately called suppliers after reading the articles, and then wondered why the items were not available.

Occasionally research discoveries are "popularized" in an exaggerated manner, with unfounded claims being made for them in the popular press, causing the public to imagine that such "miracles" can be readily obtained, it was said at the committee meeting.

No definite plans were made, however, at this meeting as to the mechanics of operating the proposed news service.

Two other tentative objectives of the Science Committee were evolved: (1) to define and determine the order of importance of needed research projects for indoor climate, and (2) to promote and support research projects for indoor climate.

Weatherhead Promotes Henderson, Robers

CLEVELAND — The Weatherhead Co. has named L. J. Henderson as assistant general sales manager, and Gene P. Robers as sales promotion manager.

Mr. Henderson joined the company in 1936, and since 1938 has acted as assistant manager of the Aviation Sales Division.

Mr. Robers, a director of the Industrial Marketers of Cleveland and the Automotive Advertisers Council, came to Weatherhead in 1942, and has directed the company's advertising activities since that time.

Rainbault To Represent Manufacturers on Coast

SAN FRANCISCO—John P. Rainbault, who recently resigned as manager of the Air Conditioning and Commercial Refrigeration Department of General Electric Co., announces the formation of the John P. Rainbault Co., manufacturers repsesentatives, with offices located in the Phelan Building in San Francisco.

The Rainbault organization will represent on the West Coast several nationally known manufacturers, among whom are The Viking Mfg. Corp. of Dayton, and The Karpark Corp. of Cincinnati.

Mr. Rainbault joined General Electric in 1930 as manager of the electric clock department.



...but they all know that any RANGE MUST HAVE GOOD INSULATION

Proof of the "sales appeal" of your product will be determined in the dealer's salesroom. And, as always, the final test of the functional design of a range is given in the user's kitchen.

Uniform results in baking, also economy of operation, depend largely upon the efficiency and physical properties of the material used in insulating the oven.

Fiberglas* in the Front Rank

Fiberglas Insulating Wool, Type TW-F, withstands temperatures up to 1000° F. And while it is produced, for commercial use, weighing 3 pounds per cu. ft., its resiliency permits the range manufacturer to install it at any density to meet the specific requirement for thermal efficiency. For example: when compressed slightly to a density of 3½ pounds per cu. ft., its thermal conductivity is .26 at 75° F. mean temperature—*and only .36 at 250° F. mean temperature.*

Light weight and extremely resilient, Fiberglas TW-F never settles or packs down. Instead, it tends to expand, assuring a well-insulated oven—from production line to the home.

Fiberglas, being glass, is *unaffected by moisture* and does not absorb or hold cooking odors which might find their way from the oven into the insulation.

Chemically stable, it will not corrode—nor is it corrosive to aluminum or steel even in the presence of moisture. And it provides no sustenance for vermin.

It is easily understandable how Fiberglas, with all of these qualities, rose to the front rank among insulations for ranges and other household appliances in which heat and cold must be controlled.

And this preference for Fiberglas reaches to the consumer, too, as a result of the long, satisfactory performance of Fiberglas-insulated equipment and the consistent advertising program acquainting the public with Fiberglas in its many forms.

Send for FREE booklet

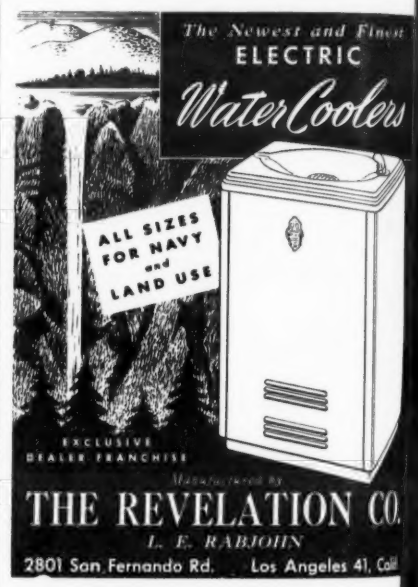
Here's a booklet that will bring you up to date on the subject of insulating household equipment. Write for "Fiberglas Thermal Insulation". It should be helpful to you in your present planning. *Owens-Corning Fiberglas Corp., 1848 Nicholas Bldg., Toledo 1, Ohio. In Canada, Fiberglas Canada Ltd., Oshawa, Ontario.*

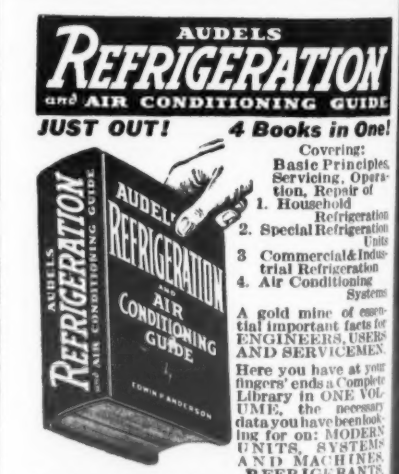


ARMY E NAVY

FIBERGLAS THERMAL INSULATION

*T. M. Reg. U. S. Pat. Off.







Locker Plant Operators Divided On Point of Selling Home Units

Some Plan To Go At It Intensively; See Advantage In Having 'Standby' Space

COLUMBUS, Ohio — There was little unanimity among refrigerated locker plant operators at their national meeting here last week on the questions of whether or not they would sell home freezer cabinets, and merchandise quick-frozen foods aggressively.

The discussions were held at one of the breakfast meetings which has become traditional at meetings of the National Frozen Food Locker Association. E. G. Spencer presided.

Concern about the future of the locker plant business was expressed by Howard E. Ullery, South Bend, Ind. operator, who urged that locker plant operators get into the business of retailing both cabinets and foods, so that he could keep the whole course of the business under control.

'ADVISE' SMALL CABINET

Operators could reasonably assume the role of "experts" on storage and use of frozen foods in the home, and could advise the purchase of a home freezer of 6 cu. ft. or less in size, which would possibly then necessitate the rental of a locker by the owner of such a unit.

The operator of a Texas locker storage plant came up with the thought that "two-temperature" household electric refrigerators be recommended by locker plant operators, the idea being that with limited space in the household refrigerator, a locker rental would be advantageous.

Objection to this idea was voiced by an Illinois operator, who voiced the opinion that low-temperature compartments in household refrigerators would be too small, and would thus force the homeowner into making too many trips to the locker storage plant.

OPERATOR MAKES SURVEY

A Texas operator with 1,200 customers surveyed them and found that 57% of these customers plan to purchase home freezer cabinets when they are available.

This same operator believes he has found a "sales point" for locker rentals among home freezer owners in the "safety" factor that is afforded by having a locker rental in case the home freezer unit should get out of commission when it has a load of food.

Other operators chimed in and cited experiences that demonstrated that this "safety" or "insurance" factor of the home freezer owner's having a locker rental might be an important factor.

So the question naturally came up, shall the locker operator sell the home freezer units, and service them, and in a measure be morally responsible to see that the owner of one of his home units have his food safeguarded in case of a breakdown, whether or not he had rented a locker? Or should the locker plant operator "stick to his knitting" and merely try to rent all the lockers he could?

PROBLEMS ARE CITED

Many problems face the operator in merchandising home freezer units, declared the proprietor of an Indiana plant. It involves capital requirements that many operators are not in a position to handle, and brings the locker plant operator into competition with established dealers and distributors of appliances.

There is going to be a big revolution in food buying and retailing habits, said this same Indiana operator, and he urged those with locker plants to concentrate on the sale of quick-frozen foods and locker plant rentals rather than home units.

Warnings were also sounded by some operators that the merchandising of home freezer cabinets would make it necessary for the locker operator to get into the refrigeration servicing business.

SERVICE IS MINIMIZED

Rebuttal to this was made by—

(1) A representative of Deepfreeze Division of Motor Products Corp. who said that their records had revealed very little of a service problem on this type of unit, and what refrigeration service was involved could generally readily be handled by the distributor or a servicing firm under contract to the distributor;

(2) By other operators who stated that in their contacts with distributors of home freezer lines, they had been assured that the servicing of the units would be taken care of by the distributor.

C. G. Holme, Sebastopol, Calif. operator, stated that he had been approached by an appliance dealer who was planning to sell home freezers, and asked to provide "standby space" for emergency use of the dealer's users of home freezer cabinets, if and when a complete breakdown of some home unit might occur, and he said he was planning to do so.

'GET IN FOOD BUSINESS'

A Texas operator expressed worry over the fact that locker plants would be "short circuited" in the matter of selling frozen foods not only to owners of home units, but even to those renting lockers from him. The answer to this, he was told, is to get wholeheartedly into the frozen food business, even to the point of buying a truck and making deliveries to the home. Frozen food companies are looking for distributors, especially those who have facilities for proper storage of the products, it was stated.

Fear that the large meat packing concerns and the chain grocery stores will set up their own locker storage plants and charge a low locker rental as a drawing card was expressed by an Ohio operator. Consensus was that the way to meet any such possible suggestion was again to be actively in the frozen foods business, sending out bulletins with suggested menus, offering delivery service, and the like.

Preference for locker renters who also own home freezer units was expressed by a New Jersey locker plant operator for the following reasons:

(1) The extra storage space which the renter has means more sales of the frozen foods which the operator sells:

(2) The processing ratio per customer is increased, because of the extra storage space which the customer has, and the higher ratio of processing space to locker storage space in a plant, the greater the profit to the operator.

ANY REFRIGERATION USER CAN
1. INCREASE REFRIGERATION CAPACITY
2. SAVE UP TO 35% OF POWER
3. SAVE CONDENSER WATER COST BY INSTALLING A
NIAGARA *Duo-Pass* AERO CONDENSER

Evaporative condensing with the NIAGARA Duo-Pass lowers condensing temperatures and reduces head pressures. Users have found that power savings as high as 35% have resulted at the same time that refrigeration capacity was increased. By reducing the condensing temperature, the NIAGARA Duo-Pass also prevents the deposit of scale on condenser tubes—holds the efficiency of the condenser constant and makes these savings permanent.

By the use of atmospheric air to take up the heat of condensation, 95% of condenser water is saved. As it replaces both cooling tower and shell-and-tube condenser, the NIAGARA AERO CONDENSER is inexpensive to install and offers refrigeration users the simplest and most practical way to increase capacity and cut costs.

Write for Bulletins 91 and 93

NIAGARA BLOWER COMPANY
"25 Years of Service in Air Engineering"
NEW YORK ADDRESS: Dept. AC-104
6 E. 45th Street, New York 17, N. Y.
Field Engineering Offices in Principal Cities

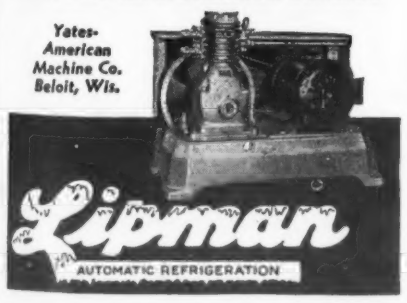


PATENTED

NIAGARA EQUIPMENT FOR FOOD INDUSTRIES: AIR CONDITIONERS, DEHYDRATORS, COOLERS, "NO-FROST" METHOD OF PRE-COOLING, FREEZING AND HOLDING, AERO HEAT EXCHANGERS, "DUO-PASS" AERO CONDENSERS

For: TRUCKS, LOCKERS, COOLERS, COUNTERS AND CABINET CONVERSIONS, use:
KOLD-HOLD PLATES
KOLD-HOLD MFG. CO.
LANSING, MICH., U. S. A.

FOOD MUST BE CONSERVED
Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.
GENERAL REFRIGERATION DIVISION
Yates-American Machine Co. Beloit, Wis.



NEW 1944 CATALOG



Write for copy on your letterhead
Washing Machine Parts Catalog will not be issued in 1944
SERVICE PARTS CO.
2511 Lake St. Melrose Park, Ill.



Deepfreeze ADVERTISING LIKE THIS BRINGS OVER 4,000 BOOKLET Requests PER WEEK....

Convincing proof of the widespread interest in the Deepfreeze Home Freezer is to be seen in the instantaneous and impressive response to current Deepfreeze national advertising.

Perhaps sooner than you think, that interest in the Deepfreeze will mean a great new selling—and money-making—opportunity for you. Deepfreeze advertising is planting the seeds of desire for Deepfreeze today. Now is the time to get ready for the harvest tomorrow.

DEEPFREEZE UNITS ALONE PROVIDE 100% PRIMARY FREEZING SURFACE

Full-page Deepfreeze advertisements in leading magazines are awakening home freezer buyers to the vital significance of the Deepfreeze freezing principle—100% Primary Freezing Surface—a fundamentally superior feature that no other home freezer can offer. The Deepfreeze freezing principle is protected by exclusive patents.

In a Deepfreeze alone, a solid wall of direct-action freezing surface entirely surrounds the food storage chamber. Thus, in a Deepfreeze the maximum temperature differential between refrigerant and food storage chamber is less than two degrees. This prevents food dehydration, keeps foods fresher, longer—keeps operating costs lower. And the clean "machinery-free" interior means more food storage space.

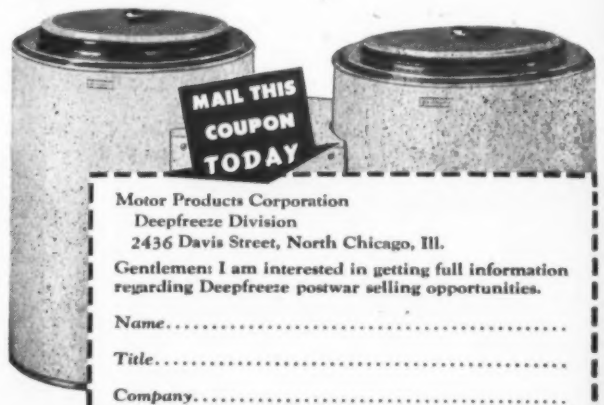
Thousands of Deepfreeze units serving America since 1938 prove the dependability and trouble-free performance of the Deepfreeze. Before you decide on selling any home freezer, be sure to learn why none can be "just like" a Deepfreeze!

AWARDED DETROIT PLANT — ARMY E NAVY

Cartridge cases, airplane nose and tail gun turrets, blood desiccating units and industrial freezing equipment are among the war products that Motor Products Corporation is proud to be making to speed the day of Victory.

Deepfreeze
TRADE MARK REG. U. S. PAT. OFFICE

ONLY MOTOR PRODUCTS CAN MAKE A "DEEPFREEZE"
MOTOR PRODUCTS CORPORATION
Deepfreeze Division: 2436 Davis Street, North Chicago, Illinois
Main Plant: Detroit, Michigan Canadian Plant: Walkerville, Ontario



Motor Products Corporation
Deepfreeze Division
2436 Davis Street, North Chicago, Ill.
Gentlemen: I am interested in getting full information regarding Deepfreeze postwar selling opportunities.
Name.....
Title.....
Company.....
Address.....

$84 Million Home Cooling Sales Yearly Is Airtemp Prediction After Survey

Industry at Threshold of Big Volume, 'Climate' Forum Told by Cameron

DETROIT—In the fifth year after the war ends the air conditioning industry will sell 197,840 residential cooling units at a value of $84,060,000 (based on the 1940 dollar), believes the Airtemp Division of Chrysler Corp., according to Ralph C. Cameron, Airtemp director of merchandising.

Speaking before the Indoor Climate Institute forum held here recently, Mr. Cameron presented by means of slides some of the conclusions drawn by Airtemp officials after a $50,000 survey of the postwar market.

Estimates Conservative

The estimates are admittedly conservative, but do indicate, Mr. Cameron said, that the residential air conditioning business is at the threshold of volume production. Note on the charts (reproduced from the original drawings made for the slides) how sales of residential units in 1941 jumped sharply to 42,641 from the 5,682 units sold in 1940.

Airtemp predicts a similar big jump in the first 18 months after V-Day (allowing six months for reconversion). Sales in V-1 should total 86,004 units, a gain of 102% over 1941. Dollar volume will rise correspondingly.

Following are excerpts from Mr. Cameron's talk accompanying the slide presentation:

"As we all know, the air conditioning business is divided into the three main fields, industrial, commercial, and residential. Air conditioning started in industry. It was there it made its first, great, rapid strides, and then commercial, and they went to town with it. Maybe 10 times as many installations are now in commerce as in industry, and the most recent comer has been residential, and since we know the most about the application of industry and commercial, let's talk about the one that is newest, residential.

"Before the war, as far as residential air conditioning is concerned, was found these two main classes, room units and the central types. Bear in mind in the postwar period we will have many new additions to industry, many new additions to commercial, as more and more doctors' offices and stores and restaurants, and so forth, avail themselves of the benefits of air conditioning. And the lessons learned in the war industry have proven to many manufacturers the self-liquidating benefits that come from the additional air conditioning," said Mr. Cameron.

"Now let's take a look at the other phase, the youngest member of the air conditioning family, the residential.

Prewar Units Costly, And Not Too Good

"Before the war it cost $250 to $300 to put a room unit in the average bedroom or office or living room, and I think, frankly, you may say it did not do such a terribly good job. In many instances, it was noisy, and in many instances not quite big enough to give complete satisfaction, although it was better, of course, than not having any," he declared.

"Then came the time when you could hook together your warm air furnace and a package of cooling in your basement. In a typical system the warm air goes down through the duct, across the fan and filter and is heated and returns to the house. In the summer the air comes down, is detoured across the collant coils, where it is dehumidified and cooled and returned to the living quarters.

"These prices ($1,500 for a year-around unit in a new home and $900 for adding comfort cooling to an existing heating plant) are not typical of the industry, but they are typical of our company," he said.

"In the new house a $1,500 plant consisted of an air conditioning system for complete control of these four basic fundamentals: filtration cycles, dehumidification and cooling in the summer time, and in the winter time adding the proper humidity and heating. I think we have quite a few of those out that were installed for less than $1,000.

"Now, if you were fortunate enough to have your heating plant in, the ductwork in, then the cost ran from $750 to $900, and in many instances as low as $500. The cooling package could be added to your existing furnace.

'Residential Market May Surprise Us'

"So after some years of field experience, we believe that we are off possibly to a new market in residential air conditioning that may in some respects surprise a lot of us," Mr. Cameron declared.

"We are indebted to the Edison Electrical Institute for the result of their survey in 1940 and again in 1941, to show us who the customers were and the relative volume, who bought the most.

"So expressed in horsepower, you will find on this chart in the white line, number of horsepower sold to date to the various classes of buyers, the theater being the first and most important. Then in 1940, the first shaded section shows the purchasers in that particular year, and the next shaded section on the end are the purchasers recorded in horsepower for 1941.

"Note that industry took a sizeable slice. Note the residential at the bottom, very small. In both 1940 and 1941 commercial took the larger slice, but industry stepped up in 1941, principally due to the war effort, but the residential applications remained pretty much steady.

"Up to now we have given you pretty much what we believe to be facts. Here is something that is purely opinion," he continued.

"It is our opinion that a better quality of postwar air conditioning, a more packaged product, something put together at the factory, carefully engineered and inspected, may lead the American public to buy vast quantities of air conditioning for the home.

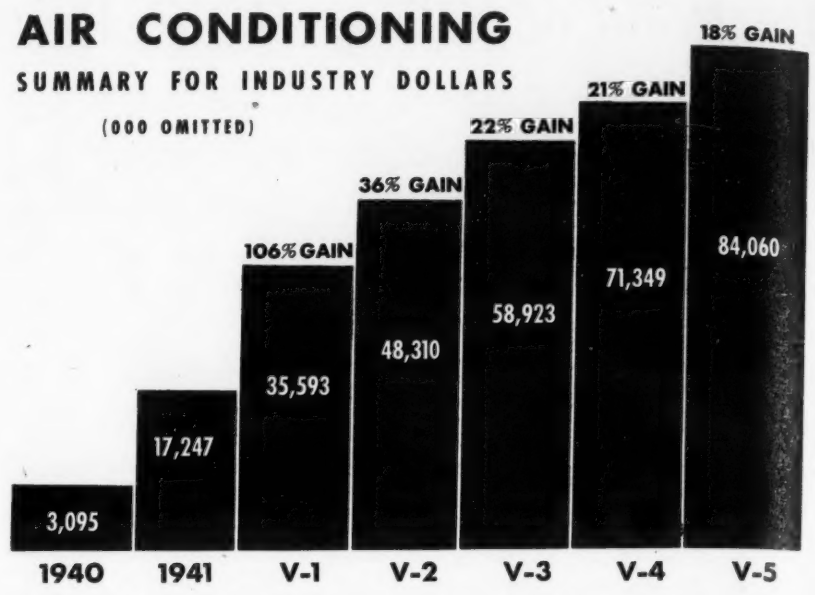
May Follow Pattern Of Household Refrigerator

"It may follow the same pattern as the domestic refrigerator market. . . . When you bear in mind there are roughly 8% of the people in this country who earn $5,000 a year, or more, some 35,000 families, it seems to us to be reasonable if we took .5% of that particular group who earned $5,000 a year or more, and you come with an answer of 13,500 as a minimum number that might, the first year after the war, be interested in buying year-around air conditioning for their home.

"So to have a figure in mind, we set that up as the V-1 industry potential. Most people who have seen

(Concluded on Page 27, Column 1)

Future of Home Air Conditioning?



Following a $50,000 market survey, officials of Airtemp Division, Chrysler Corp., made the above conservative estimate as the future dollar volume of the residential air conditioning industry.

7-7/10% OF 35,000,000 Families Earn $5,000 Per Year or More

Suppose Only ½% of This Group (or 13,500) Can Be Sold Residential Air Conditioning by Industry in V-1

Year	Household Refrigeration Units	Industry Average Price	Industry Residential Air Conditioning Year	Units
To 1920	10,000	$600		
1921	5,050	550		
1922	12,000	525		
1923	18,000	475		
1924	30,000	450		
1925	75,000	425	V-1	13,500
1926	210,000	390		
1927	390,000	350		
1928	560,000	334		
1929	840,000	212		
1930	850,000	215		
1931	965,000	258		
1932	840,000	195		
1933	1,080,000	110		
1934	1,390,000	172		
1935	1,722,000	106		
1936	2,222,000	104		
1937	2,559,000	171		
1938	1,430,000	172		
1939	2,085,000	169		
1940	2,780,000	164		
1941	3,700,000	161		



"I'm glad you asked. The salad dressing was by Chef Pierre . . . the new swing singer is Sugar LaMar . . . and the Air Conditioning is by General Electric."

Mm-m-mm, taste that salad! Boy just look at that Miss LaMar. Ah-h-h, breathe in some of that wonderful air . . . that clean, bright, "top o' the morning" air . . that cool, fresh, conditioned air!

General Electric Air Conditioning can be a top drawing card in any night club. It is designed to maintain *both* the temperature and humidity at ideal levels. And both are important.

After the war, night clubs (and theaters, stores, offices, factories, even homes) will find General Electric Air Conditioning a most important adjunct to better living . and better business. And because of its war experience, General Electric will be even better equipped to serve you.

☆ BUY...and hold...WAR BONDS ☆

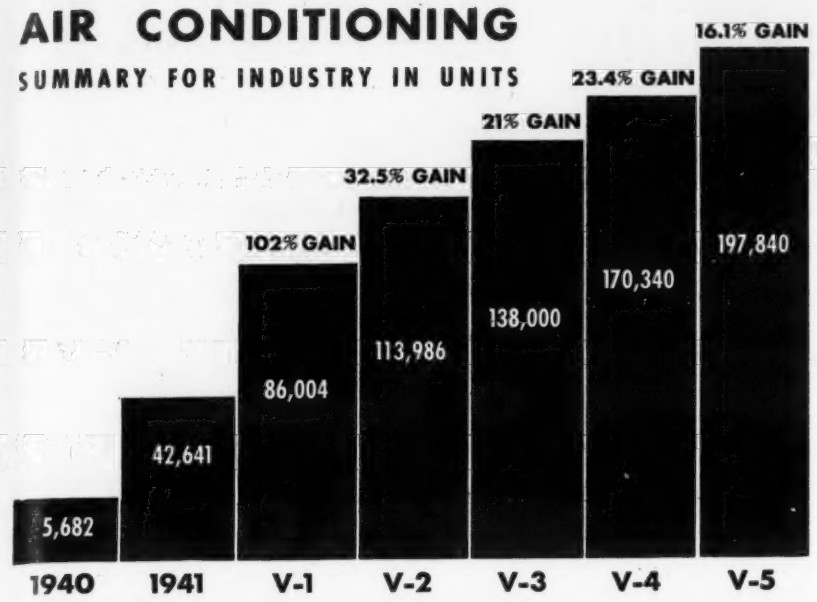
General Electric Co., Air Conditioning and Commercial Refrigeration Divisions, Section 4878, Bloomfield, N. J.

Air Conditioning by
GENERAL ELECTRIC

Hear the General Electric Radio Programs: The "G-E ALL-GIRL ORCHESTRA," Sundays, 10 P.M., EWT, NBC... "THE WORLD TODAY" News, Every Weekday, 6:45 P.M., EWT, CBS

Electrimatic
AUTOMATIC CONTROL VALVES AND REGULATORS
2100 INDIANA AVENUE • CHICAGO 16, ILL.

Industry's Unit Sales May Reach 197,840



The big gain in residential cooler sales in 1941 over the previous year is likely to be approached in the first year of full production after the war ends, predict Airtemp officials. Production should climb steadily in the five following years also.

* * *

Public Acceptance Foretells Packaged Unit Boom—Cameron

(Concluded from Page 26, Column 5)

it say it is way too small. Possibly it is. But, let's see where it stacks up with domestic refrigerator business.

"From 1910 to 1920 it took the industry 10 years to sell 10,000 units, and the average price was $600. In 1921 better than 5,000 were sold, and the price dropped $50. Look from 1921 to 1941. Notice the volume went from 5,000 to 3,700,000. Notice the price line dropped from $550 to $161.

"Note that the year 1926 . . . when General Electric and others came into the market and made a real investment in this business; it was in those days that 414 manufacturers were dividing roughly somewhat less than a quarter of a million units per year. Today it is 3,700,000 units per year. The product being offered at $161 is a far superior product to the products that cost $550 in the good old days of 1926.

'First Families' Start New Product Trends

"Therefore, is it reasonable . . . that we may visualize a set of figures that follow the pattern of the electric refrigerator business? In 1922 they were laying $500 on the line for a refrigerator. The same people, the first families to buy radios, or anything new, were willing in those days to lay $500 on the line for a refrigerator, which was not to be compared with the one today, in quality or performance.

"Do you think those same families will be willing to lay roughly $500 on the line for year-around comfort, to give them summer cooling and dehumification so they may have indoor climate control properly for the summer months? It seems to us that that is where most things start, with the apex of the triangle of most markets, with the folks who can first afford it," continued Mr. Cameron.

"Well, if you agree with us that that could happen, then let your imagination carry your thoughts to a large colume of figures under the 13,500 [see chart] and make it match up with the 3,700,000 and at the same time imagine that the price column will diminish in about the same rate as in the domestic refrigerators. See how long it took the domestic refrigerator to go from 5,000 to 42,000 per year. It took them quite a few years. But that is what happened in the air conditioning business in one year, from 1940 to 1941.

"In other words, the industry was just simply getting its stride when along came the war, and of course, stopped things for a time.

"We belive these are the factors that will influence the postwar air conditioning business for the industry. First, widening public acceptance. Most everyone we know has had definite and concrete experience with air conditioning. Some of it has not been so good either, so we should be frank and say some of the air conditioning of public buildings reminded you of a cold, clammy cave.

"So what?

"Some of the earlier attempts at the radio and the automobile were rather sad, too, but great progress has been made in the last two years, and today most any company of reliable size and engineering research ability can properly install and very capably serve more packaged products.

"It was brought out by many speakers [at the I.C.I. Forum] that it is equally important to have a man well able to engineer and install, as it is to make a good product, and to make his problem less of a problem, doesn't it seem to you that the industry will tend toward the time when more and more of the products can be put together at the factory under controlled methods of inspection and manufacture?

"Also consider new industrial applications. During the war there sprang up many, many factories, some 23 acres of one factory in Chicago, thoroughly and completely air conditioned. That is a trend which we see coming, and we know that in industrial processing it has proven its worth over and over again, until now it isn't a question of 'Do they want it?' It is a question of 'How soon can they get it?'

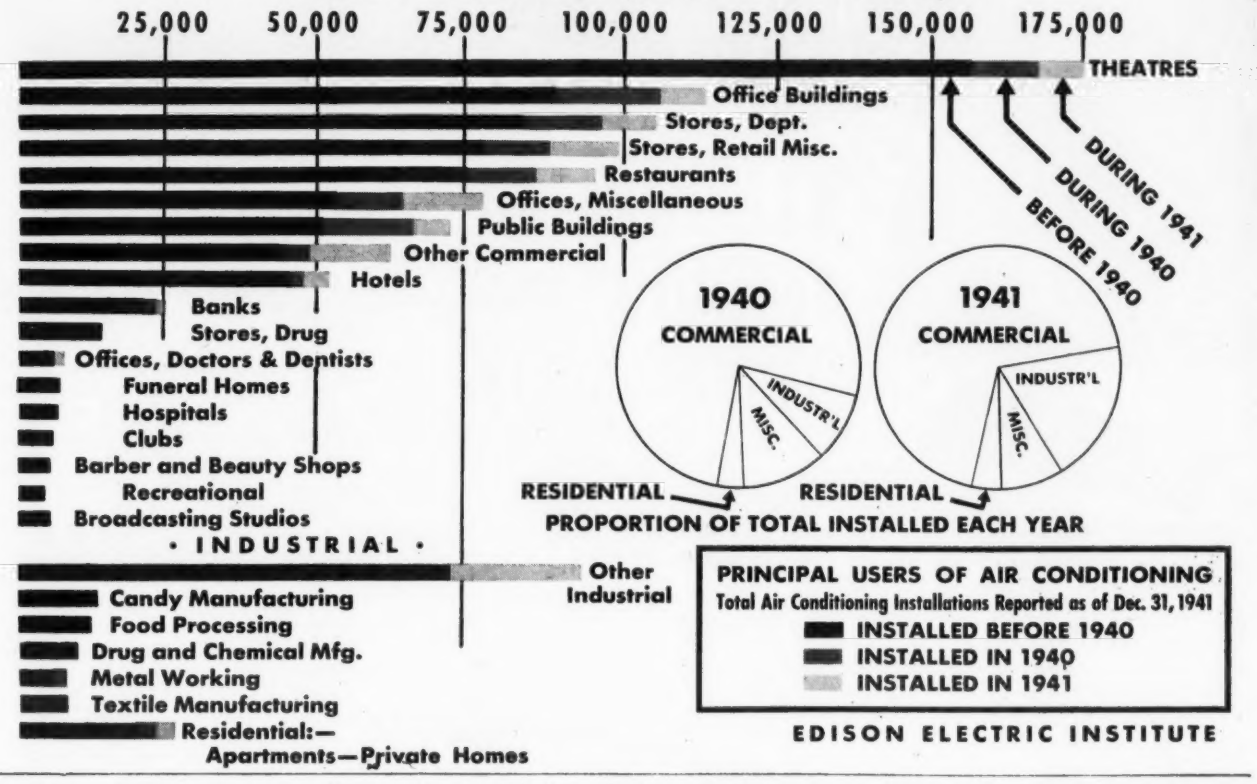
"The residential air conditioning promotion, we believe, will have to be joined in by many manufacturers. We hope all.

"I think both the gas utilities and the electric utilities will be very happy to see this I.C.I. group come to them with a story of where they can sell the industrial load which today they are giving to the war effort, and which tomorrow, with the end of the war, they will have back in their laps. They would like very much to have you help them sell it to the residential customer at a higher rate."

PRINCIPAL USERS OF AIR CONDITIONING

E. E. I. REPORT 1941 AS OF 12-31

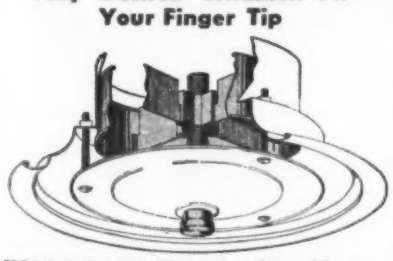
HORSEPOWER (Prior to 1940)



KNO-DRAFT

PROVIDES MAXIMUM EFFICIENCY THROUGH CONTROLLED AIR DIFFUSION

Any Desired Condition At Your Finger Tip



KNO-DRAFT *Type K Adjustable Air Diffuser With Type D Volume Damper*
Patented

ALL Kno-Draft Air Diffusers are also equipped with *air direction* adjustment to suit seasonal or individual requirements. Their engineered design insures more effective room air mixing, more uniform room temperature and controlled, noiseless, draftless air diffusion at low cost.

Write For Descriptive Folder.

W. B. CONNOR ENGINEERING CORP.

114 East 32nd Street — CONNOR — New York 16, N. Y.

This advertisement is currently appearing in a number of consumer publications to increase the acceptance and recognition of CURTIS Air Conditioning and to help you develop postwar prospects and sales for CURTIS equipment.

Modernize with Modern, Efficient

CURTIS

AIR CONDITIONING

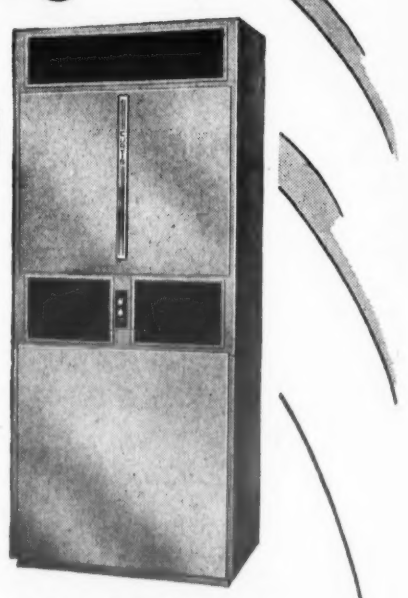
If your postwar modernization plans are up-to-date, they'll include modern air conditioning, too. Air Conditioning steps up employee morale and efficiency, protects your products from summer heat, attracts customers, and invites them to stay longer and buy more.

In the highly competitive conditions which will prevail after the War, those establishments that have modernized through air conditioning will be the leaders in any field. The buying public will demand it more than ever before.

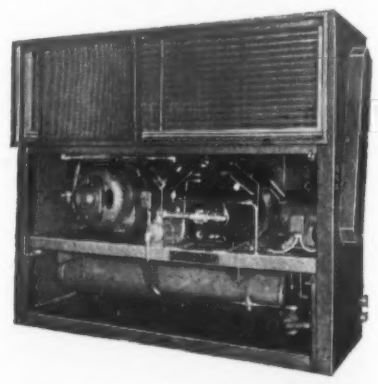
The dependable Curtis line of Packaged and Remote Type Air Conditioning Units includes sizes from 3 to 15 tons and offers these advantages:

- Low first cost — economical operation
- Quick, easy installation
- Units cool, dehumidify, filter, and circulate the air
- Modern streamlined appearance
- Models for every requirement
- Adaptable for heating, too.

Let Curtis work with you, your architect, or engineers on your postwar Air Conditioning plans. Write today for complete information.



3 and 5 ton Packaged Type Air Conditioning Units

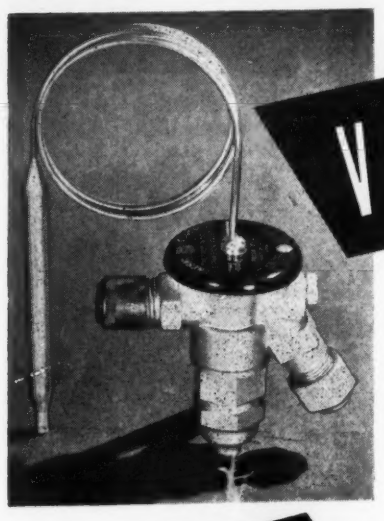


7½, 10, and 15 ton Remote Type Air Conditioning Units

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

CURTIS REFRIGERATING MACHINE DIVISION *of Curtis Manufacturing Company*
1912 Kienlen Avenue, St. Louis 20, Missouri

CURTIS REFRIGERATION AIR CONDITIONING AND COMMERCIAL



V-200 THERMAL EXPANSION VALVE

Unsurpassed Sensitivity and Dependability

FEATURES

Readily removed orifice cartridges eliminates necessity for stocking several sizes for low tonnage installations.

Carefully lapped hard faced ball insures positive tight shut-off.

Thoroughly field tested.

Handles freon, methyl chloride, sulphur dioxide.

Write for Catalog 52

GENERAL CONTROLS
801 ALLEN AVENUE • GLENDALE 1, CALIFORNIA
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Cleveland • Chicago • Dallas • Denver • San Francisco



Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Methods of Varying the Capacity Of Condensing Units (Part 2)

Fig. 2 illustrates another method of unloading a compressor. This method can be used only with multi-cylinder compressors in which the discharge of one group of cylinders may be separated from that of another group, such as in Fig. 2 the discharge of one bank of two cylinders of a four-cylnider V compressor is by-passed back to the suction so those two cylinders do no useful work, and the other two cylinders do all the useful work done by the compressor.

This method has the advantage that it is fairly economical, for when one bank only is in use the current consumption is only about 60 to 65% of that when all four cylinders are in operation under similar conditions.

Its big disadvantage is that it is not flexible, for it allows for either full capacity when the by-pass is closed, or one-half capacity when the by-pass is open, with no other steps or variations, so the load must be capable of being divided into two approximately equal portions. If, as in some applications, the load changes from full to one-half load or thereabouts, this method may be helpfully used.

HOW IT OPERATES

As indicated in the wiring circuits in Fig. 2, when both thermostats 4A and 4B are open due to both evaporators being cold enough, the liquid line solenoids 3A and 3B are closed and the machine pumps down and cuts off at, for example, 8 p.s.i. (methyl chloride) on the **standard** low-pressure control 6M.

Immediately after the compressor stops, the suction pressure rises somewhat and may even cause the motor driving the compressor to start and stop a time or two (false cycle) until the evaporator coils have been pumped dry.

If thermostat 4A calls for refrigeration (closes), liquid line solenoid valve 3A opens, liquid refrigerant passes into evaporator coil 1A and the suction pressure starts building up.

When it reaches the cut-in point of the **reversed** pressure control 7M, this control opens, and the by-pass solenoid 8M closes. The suction pressure continues to build up until it reaches 26 p.s.i. at which time the **standard** pressure control 6M closes, the magnetic starting switch 2M closes, and the compressor starts.

Since the by-pass solenoid 8M is closed, the compressor operates on full capacity although only one-half the load is on. Due to this out-of-balance condition, the suction pressure will soon be reduced below the normal average suction pressure of 15 p.s.i. When it falls to 12 p.s.i. the **reversed** pressure control 7M closes, opening the by-pass solenoid 8M and the machine then runs on one-half capacity (2 cylinders).

Since the one-half load is now balanced by one-half capacity of the compressor, the suction pressure rises to a normal average suction pressure of approximately 15 p.s.i.

If in the meantime, the other thermostat 4B does not call for refrigeration, the condensing unit continues to operate on one-half capacity on one evaporator coil until thermostat 4A is satisfied and liquid line solenoid valve 3B closes. The suction pressure is then reduced quite quickly to 8 p.s.i., the **standard** low-pressure control 6M opens and the compressor stops.

If, however, with the compressor running at approximately 15 p.s.i. suction pressure, on one-half capacity on evaporator coil 1A only, thermostat 4B warms up to its cut-in setting and closes, the liquid line solenoid valve 3B is opened, evaporator coil 1B is made active, and the suction pressure rises, as full load is now thrown on the compressor running at one-half capacity with 2 cylinders by-passed.

The suction pressure rises from 15 p.s.i., and when it reaches 22 p.s.i. the reversed pressure control 7M opens, by-pass solenoid 8M closes, and the compressor then runs at full capacity (all 4 cylinders) to balance full load. The suction pressure therefore falls to 15 p.s.i.

BY-PASS REVERSE PRESSURE CONTROLLED AND COMPRESSOR DIRECT PRESSURE CONTROLLED

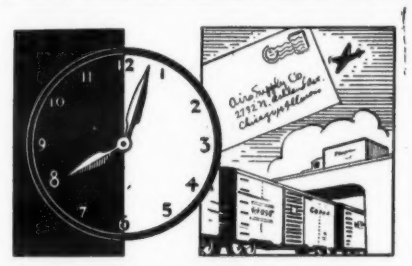
If, with both evaporators on (both thermostats 4A and 4B closed and both solenoids 3A and 3B open) and condensing unit running at full capacity, one thermostat opens (either 4A or 4B), the suction pressure drops to 12 p.s.i., the reversed low pressure control 7M closes, by-pass solenoid 8M opens and the compressor runs at approximately 15 p.s.i. suction pressure, at one-half capacity (on 2 cylinders) until the temperature of the thermostat that is "on" is satisfied and opens and the liquid line solenoid valve to which it is connected closes.

The compressor continues to run and "pump down" the low side of the system to 8 p.s.i. at which time the standard low pressure control 6M opens and drops out the magnetic starter and the machine stops.

The above settings of the controls are merely given as examples to maintain an average evaporator temperature of approximately 21° F. (average suction pressure of 15 p.s.i. methyl chloride), operating on a defrosting cycle.

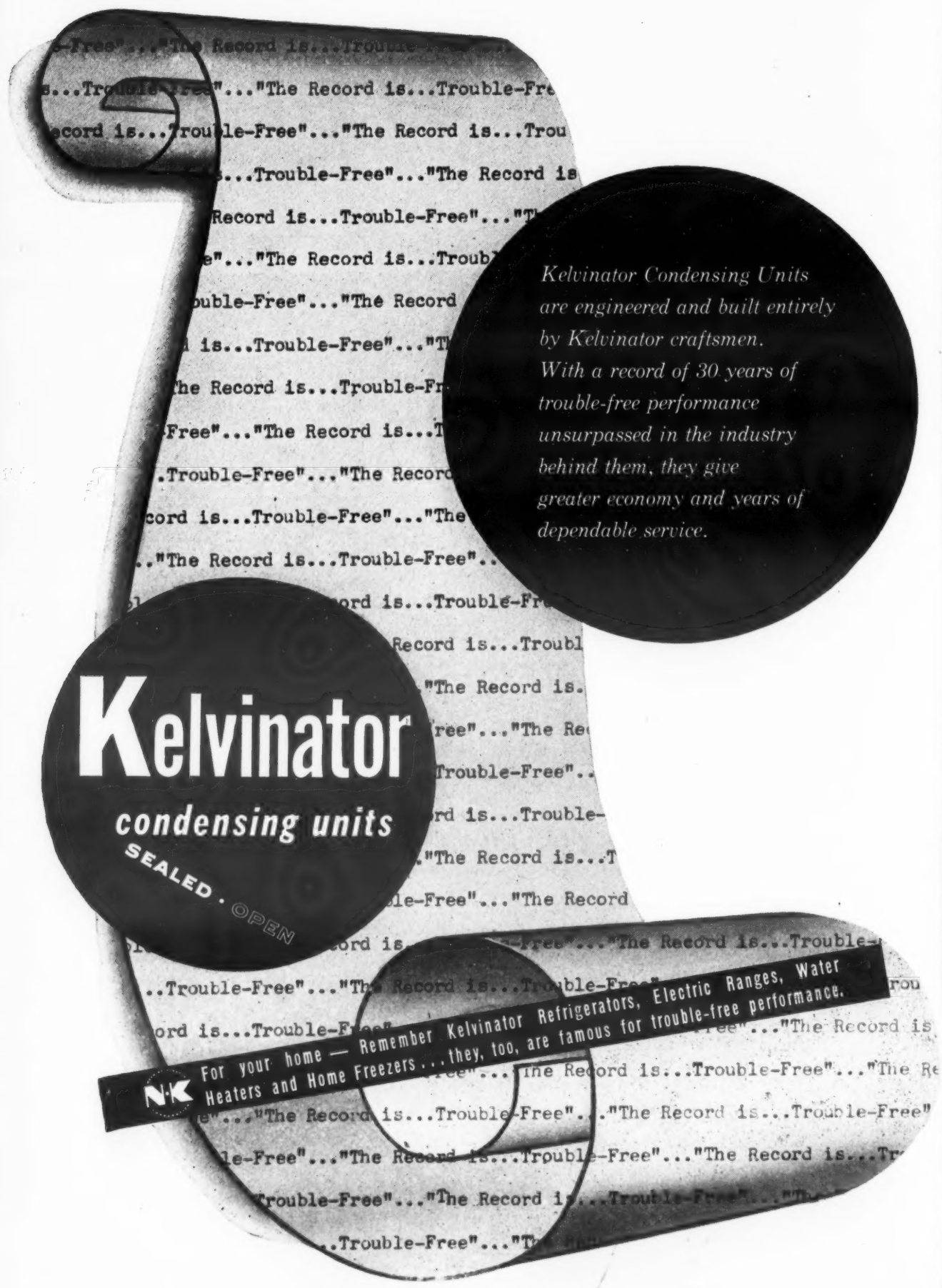
The discharge check valve 13M allows both banks of two cylinders each to discharge into the condenser when the by-pass solenoid valve 8M is closed and the compressor is operating at full capacity; but prevents the high pressure discharge of the bank (marked X) that is not by-

(Concluded on Page 29, Column 1)



AROUND THE CLOCK SERVICE **While you sleep —while you are out on profitable service calls—while you take care of other important business matters—tools, equipment, and parts ordered from AIRO speed on their way to you. No valuable time wasted waiting for counter service when you buy by mail from AIRO, the middle west jobber geared up to give nationwide service "around the clock."**

AIRO SUPPLY CO. (NOT INC.)
Dept. B WHOLESALE ONLY
2732 N. Ashland Avenue
Chicago 14, Illinois





VISOLEAK

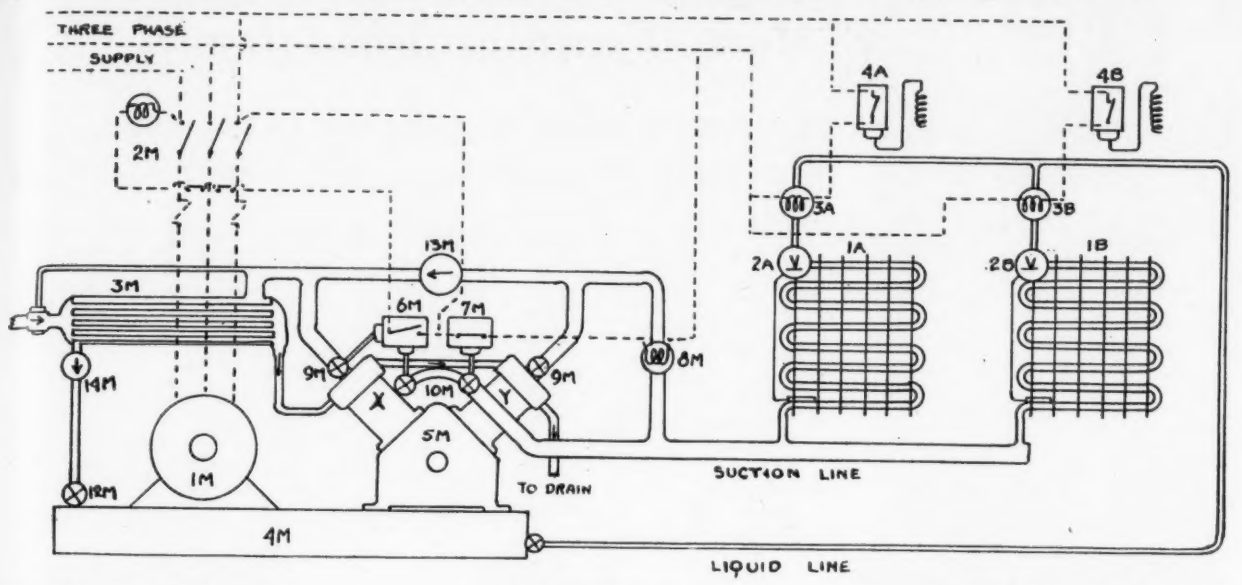
is a finely-treated colored refrigerant oil which penetrates every nook and cranny of the system. The leak is indicated by a red stain – just like the discoloration on a carburetor in which ethyl gasoline has been used. Can be used *safely* and *effectively* with any type of refrigerant.

See your jobber today. If he has not stocked Visoleak write for complete information.

Wholesale Prices		Save 10% on case lots
4 ounce bottle	$1.00	48 bottles
8 ounce bottle	1.75	24 bottles
1 pint bottle	3.00	24 bottles
1 quart bottle	5.00	12 bottles
1 gallon can	16.00	6 cans

WESTERN THERMAL EQUIPMENT CO.
5141 Angeles Vista, Los Angeles 43, Calif.

Fig. 2. Automatic Unloader By-passing One-Half of V-Type Compressor



1M Condensing Unit Motor.
2M Magnetic Starting Switch.
3M Condenser (water-cooled).
4M Liquid Receiver.
5M Compressor (4-cylinder V).
6M Standard Dual Pressure Control. (Low pressure portion makes contact on rising pressure, set to cut in at 26 p.s.i., cut out at 8 p.s.i.—H.P. cut-out set to cut out 150 p.s.i.)
7M Reversed Low Pressure Control (breaks contact on rising pressure—set to cut out 22 p.s.i., cut in at 12 p.s.i.).
8M Solenoid Valve in By-pass.
9M Discharge Shut-off Valve.
10M Suction Shut-off Valve.
11M Receiver Shut-off Valve.
12M Condenser Shut-off Valve.
13M Discharge Line Check Valve.
14M Condenser Check Valve
15M Water Control Valve—pressure type.
1A and 1B Evaporator Coils.
2A and 2B Thermostatic Expansion Valves.
3A and 3B Liquid Line Solenoid Valves.
4A and 4B Thermostats.

Use of Unloader In V-Type Compressor As a Method of Varying Capacity

(Concluded from Page 28, Column 5)

passed, from passing over into the bank (marked Y) that is being by-passed when the by-pass solenoid 8M is open.

An ordinary disc type line check valve is usually not suitable as it has a tendency to flutter and chatter, and a poppet or piston type is recommended.

The orifice size of the by-pass solenoid 8M and of the discharge check valve 13M should be approximately as large as the inside of the discharge tube of the bank of cylinders being by-passed.

Again, in this method of by-passing, the gas compressed in the by-passed cylinders is returned to these same cylinders without having gone through the condenser, so it still has its superheat (heat of compression). Therefore a water-cooled head should be used to prevent excessive heating of and damage to the discharge valves.

Variations of the connections and method of control shown in Figs. 1 and 2 may be used, according to the requirements of the individual application.

Baltimore Schooling Men For Repair Jobs

BALTIMORE—Courses in refrigeration repair work with both day and evening sessions have been started here at School No. 293 under the National Refrigeration Manpower Training Program.

Daytime classes are being conducted by Mr. Mayfort Miller five days a week from 8:30 a.m. to 3 p.m. Night school classes, conducted by Mr. Walter Volker and others, run from 7 to 10 p.m. two nights a week—Monday and Wednesday, or Tuesday and Thursday.

Evening courses offer a condensed version of the daytime instruction, it is said.

At the completition of the course students will receive a U. S. Government certificate and diploma. Thirty-three night sessions, totaling 100 hours of instruction, are required for the course, which is offered to both beginners and advanced students.

If there is enough demand, new classes will begin each Monday and Tuesday, it was announced. Special classes may be organized for a group of 15 or more from any one company.

Registrations for the refrigeration courses are accepted daily at the school, Howard and Centre Sts., between 9 a.m. and 5 p.m., and from 6 to 9 p.m.

Broadcasters Foresee New Development

CHICAGO—Rapid growth of frequency modulation, television, and facsimile printing will follow the war, say radio men who attended a conference of the National Association of Broadcasters here recently.

Frequency modulation providing clear radio reception without interference and static will completely supplant present amplitude modulation in five or 10 years, it is predicted.

Television for home use is a sure thing within a few years, but radio experts also see extensive use industrially. Progress in all parts of a plant could be observed by the factory executive in his office, and details of a manufacturing process might be closely watched by technicians. Considerable use is expected by department stores for style shows.

Facsimile printing will be a "more important and economically sounder" proposition for broadcasting stations than television within five years, believes one radio station operator.

Average retail price of television sets should be $200, and sales should reach 2,500,000 a year, believes T. F. Joyce, general manager of RCA's radio-photograph-television division. Combined FM and AM radio receivers may retail for $60, says Paul Chamberlain of General Electric Co.





Sen. Aiken Calls Quick Freezing One of Most Important Advances

Ranks It Third On His List of the Most Vital Needs of Rural Communities

COLUMBUS, Ohio—"The development of the quick-freezing process is one of the most progressive steps in the world for the feeding of people and helping farmers," declared Sen. George D. Aiken (Vermont), chairman of the Sub-Committee on Food of the Senate's Committee on Agriculture, addressing the sixth annual meeting of the National Frozen Food Locker Association here.

"The future progress of this business cannot be comprehended by the imagination. Diseases due to poor diets will disappear as frozen foods are distributed throughout the world via airplane," he predicted. "This too will offer limitless opportunity in the export field for equipment manufacturers. And in the future food will cost less and the farmer will have a year-around level income."

Quick-freezing and greatly improved shipping and air transportation will have a profound effect on the American farmer after the war, believes Senator Aiken.

"The postwar farmer will face conditions he never had before. Formerly he had local competition, but he must now take into consideration conditions which prevail in every part of the world. The postwar farmer will have a world market and with it world competition. But the American farmer can also look forward to having more highly skilled and more highly paid help. He will use more fertilizer for scientific crop control, and the farm crops of the future will hardly be touched by hand.

"With these developments it would be easily possible for agriculture to glut the market, but the undernourished people in the world will offer possibly a new market for the farmer."

The role of the locker plant in postwar rural America will be highly important, predicted Senator Aiken. Farmers need quick-freezing, both the locker plant and the home freezer. Senator Aiken sees the community locker plant becoming the community processing center for farmers who have their own home frozen food storage units.

Quick freezing ranks third on Senator Aiken's list of the most vital needs of rural communities. First is the need for better transportation and second is the necessity for making electricity available to all farmers.

Fulfillment of these needs will mean better homes and farms for the farmer and better and cheaper food for the nation and world, he contends.

Kiley to Represent Vilter in Detroit



LEO R. KILEY

* * *

DETROIT—Leo R. Kiley has been appointed Detroit district engineer for the Vilter Mfg. Co. with offices in the Donovan building, Detroit.

For seven years previous to his recent appointment Mr. Kiley was in the application engineering division of Vilter where he was engaged in the layout and design of air conditioning systems, freezing plants, and general refrigeration for breweries, dairies, and chemical industries. He is a graduate engineer from the University of Illinois.

Locker Plant Field Warned It Must 'Propagandize Itself'

'Extremely Stiff Competition' Is Predicted; Education Through 'Locker Kitchens' Suggested

COLUMBUS, Ohio — "If locker operators are going to move into the food industry, they must expect a life and death struggle," members of the National Frozen Food Lockers Association were told by Neil Banter during his talk on "Packaging and Merchandising" at the group's recent sixth annual meeting here.

With "big business betting big money" that frozen foods will be successful, locker operators will face extremely stiff competition after the war, predicted Mr. Banter. There will be strong competition from the big food distributors, and strong competition from the home freezer unit, he believes.

MERCHANDISE VITAMINS

"We have to make up our minds how to get our share of this new business. Methodical merchandising and packaging methods will help channel this new business into the locker industry," he said.

"For example, we all know that the drug trade spends millions of dollars to promote the sale of vitamins. And yet our industry can merchandise vitamins which Mother Nature put into the food. The drug trade has to manufacture the vitamins it sells, but the powerful merchandising methods make it highly profitable.

PROPAGANDA—PLUS

"The locker people ought to put on a 'propaganda' campaign to promote the locker industry, but propaganda alone won't win the battle," he warned. "The quality of the frozen food which locker operators can produce locally to meet national competition must meet or surpass that of national producers. We need to have the proper methods of food processing to preserve vitamins—which can be the basis of a powerful campaign," he added.

Locker kitchens may be a good way to promote locker plants, Mr. Banter said. With such a kitchen the locker operator could exploit quality food storage. He would have close control over the quality of food brought in for processing, and he could insure proper processing methods being used, and correct packaging methods being employed.

By showing the women patrons how to select top quality produce for freezing, and how to process and package foods, the operator could be certain that the frozen foods would be of the highest quality and thus insure that the customers would "propagandize" the locker plant, declared Mr. Banter.

MUST 'DRESS UP'

Packaging of the frozen foods is also an important factor in the successful operation of locker plants, Mr. Banter declared. When the housewife packs her own food for her own use, the package must be good but its appearance is not of great importance, but frozen food prepared by the locker operator for over-the-counter sale must be dressed up for appeal, he said.

"Lower costs in packaging are coming," he added, "and they must come to help locker operators meet the competition from mass producers."

Just what role the locker operator will play after the war when frozen food storage units come into the market is a matter of conjecture."

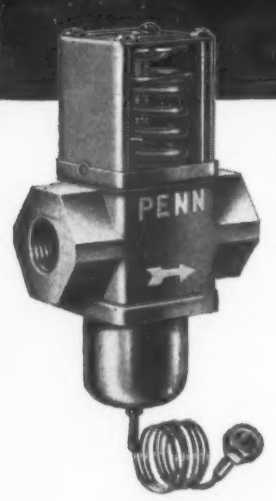
LITTLE HOPE FOR LOCKER MEN ON HOME UNITS

"According to surveys, 85% of the locker operators are planning to retail home chests, but the chances are that the locker operators will not get franchises for the big well known brands. Regular retail outlets will undoubtedly be given first choice by the big producers, leaving the locker operator with comparatively 'unknown' brands to sell.

"The operator may find that his patrons will prefer to 'take a look at' the big brands before buying an unkown, so perhaps he shouldn't be too optimistic."

You can't see them

but they're here!



the DESTRUCTIVE THREE that cripple water valves

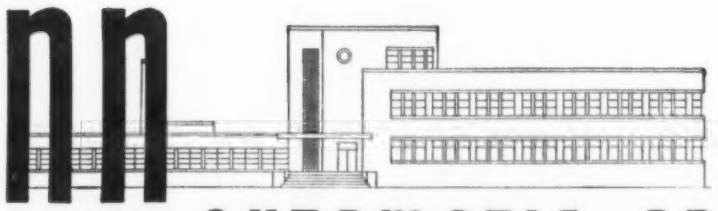
Wherever you find water, there you'll find the Destructive Three—*Sedimentation, Corrosion* and *Rust.* They've crippled many a water valve, these three . . . but not the PENN 246! That's because this new water regulator is so designed that *no sliding parts touch the water.*

Thus PENN has put a stop to sticking valve seats, rusty range springs and the abrasive desposits that cause early wear.

Water hammer is gone, too . . . yet the PENN 246 is extremely sensitive to changes in refrigerant head pressure. It's available in two types—flanged and threaded—both of which allow for *manual flushing.*

Full details on this new PENN Water Regulator are available without cost in your copy of Bulletin R-1986. Write *Penn Electric Switch Co., Goshen, Ind.* Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Powerlite Devices, Ltd., Toronto, Ont.

PENN



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS



How To Plan a Better Arranged, More Efficient Locker Plant

Suggestions From 'Experts' Cover Such Points as Temperature 'Split', Silencing of Chatty Butchers

COLUMBUS, Ohio — Numerous suggestions on how to improve locker plants were brought out in a series of breakfast and luncheon meetings for locker operators and equipment manufacturers to consider mechanical, construction, and modernization problems held during the sixth annual meeting of the National Frozen Food Locker Association here.

Because most operators usually find that their plants aren't large enough to accommodate all would-be renters after the building is completed, and expansion then is often quite difficult, two suggestions to overcome this problem were offered:

ARRANGEMENT FOR EXPANSION

(1) Extra insulation might be placed around the high temperature rooms at the time the plant is constructed, so that in the event more locker room space is required, these high temperature rooms can be converted into locker rooms at comparatively little expense.

(2) If the locker room is placed along one side of the building, beside the cooler and freezer room, additional locker room space may be obtained by constructing an addition along the locker room side of the building, provided, of course, the lot is big enough. This method would require no general rearrangement of the locker plant, one operator declared.

ISOLATING THE BUTCHER

Location of the meat cutting room, usually placed at the front of the plant, came up for considerable discussion during the informal meetings. The meat cutting room should not be at the front, because the butchers frequently waste much time chatting with locker patrons, contends A. M. Reilly of Burge Ice Machine Co., Chicago.

Some operators agreed with this view, but Howard Knapp, Lansing, *Mich.*, operator, pointed out that it depended on whether the locker plant catered to rural patrons or city dwellers. The farmer, he declared, probably isn't greatly interested in meat cutting, but it does have considerable appeal to city patrons, and may make for numerous sales of meat.

Optimum size of a locker plant was discussed at some length, and it was generally agreed that a plant should have at least 500 lockers to be successful. The number of lockers in some plants may run as high as 3,000 to 4,000, but the trend seems to be toward having several smaller plants instead of just one large plant. Smaller plants can be located to provide more convenience and less travel for patrons, it was pointed out.

One operator spoke highly of the branch type system wherein food is processed and packaged at the main central plant and then transported to branch plants for storage in the patron's locker.

URGES BIG CHILL ROOM

The need for more space in ageing and chill rooms of locker plants is also essential, it was emphasized by S. T. Warrington, of the U. S. Department of Agriculture, who actively assisted in conducting these open forum sessions.

Much discussion at one session was devoted to insulation and refrigeration equipment operation, particularly with respect to cutting down frost and dehydration.

Considerable increase in the amount of cooling surface with a low "temperature split" (the difference between refrigerant temperature and temperature of the room) will help keep up relative humidity, contends Mr. Reilly of the Burge company.

A 5° T.D.?

Although a 15° temperature split is now considered satisfactory, this should be brought down to about 5°, believes Mr. Reilly.

The amount of insulation to use is open to question; but it is obvious that while more insulation will be helpful, there is a limit beyond which it is not practical to go, operators were told. Insulation of about 10 in. thickness, vapor-sealed, is about the best thickness to cut temperature split and reduce operating costs, believes Harry L. Quinn, of the Pacific Lumber Co.

Operators who inquire as to which refrigerant they should use in locker plants were advised by V. C. Patterson of York Corp. to employ ammonia for anything over 500 lockers, and "Freon" for the smaller installations.

The Rural Housewife Who Rents a Locker Finds Room For Improvement

COLUMBUS, Ohio—Locker plants have been extremely helpful to the rural housewife, but some farm women have found several shortcomings in locker plant operation, declared Mrs. Joseph Smith, locker patron from Groveport, Ohio, who spoke at the sixth annual meeting of the National Frozen Food Locker Association here recently.

"I have personally been satisfied with lockers, and rent four of them myself, but some women have made complaints," she declared.

"Some locker plants aren't as sanitary as they should be, and in some plants foods are not properly wrapped. They don't appear appetizing. Some locker plant operators are also rather careless about processing of foods.

OBJECT TO ICE

"Another serious complaint is that ice is sometimes permitted to accumulate on the floor of cold rooms. Patrons may slip or fall, and I know of one person who was seriously injured. Perhaps a regular inspection of locker plants is needed to prevent such accidents," suggested Mrs. Smith.

Several suggestions for postwar improvements of locker plants, from the viewpoint of the rural patron, were enumerated by Mrs. Smith:

"1. We will need and want more lockers.

"2. Locker plants should be located closer to home. Traveling excessive distances from home to locker plant is inconvenient and wastes time.

"3. Because very few farmers do their own butchering now, locker plants should be equipped with modern slaughtering facilities.

"4. A large number of women prefer the drawer-type locker, for it is easier to find foods in such a locker.

"5. Locks on a locker frequently freeze shut, a great inconvenience. Perhaps a new type, non-freezing lock will be available after the war.

"6. In some plants only one patron at a time has access to the lockers. It is somewhat annoying to have to wait your turn, especially if you are in a hurry.

ASK LONGER HOURS

"7. Farmers can't always go to the locker plant when they want to, so locker plants ought to be kept open longer hours to accommodate such patrons.

"8. Locker plant operators should sponsor an educational program on the proper preparation of foods for freezing.

"9. Demonstration kitchens maintained at the locker plant might help in this educational program.

"10. While some people say they prefer to have frozen food locker facilities in their own homes, I personally would want both the home storage unit and lockers at a locker plant. The locker plant offers food processing and wrapping facilities, which are a great advantage."

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650,000 MASTER FOOD CONSERVATORS IN USE

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★ **Jointless Type** ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

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222 CANAL ST.
ROME, N. Y.

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TESTED PURITY for SERVICE SURETY

"EXTRA DRY ESOTOO", "V-METH-L" AND METHYLENE CHLORIDE
AGENTS FOR KINETIC'S "FREON-12"—AND "FREON-22"

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Cold Mercy

ICE has added a new phrase to your doctor's vocabulary. It is *Refrigeration Anesthesia*, a revolutionary new technique in surgery that is helping our Navy's Medical Department save lives in the South Pacific.

The ice that streams at a flick of a switch from the Navy's York FlakIce machines provides a complete local anesthesia. Not only the nerves, but the whole living tissue substance is placed in frozen sleep with consequent freedom from pain and shock.

Urgent operations may be postponed for longer periods in greater safety. Under cold's kindly care, bacteria growth is checked, infection minimized, and the local metabolism is reduced to a point at which even a damaged blood supply may be sufficient to nourish the surviving tissues.

Even on the most far-flung outpost, ice is available for this new mission of mercy. Completely portable, the York FlakIce machine can produce ice in a few minutes. Curved crystal ribbons that don't stick together pour from this unique apparatus . . . ready for the cold packs that may mean another triumph for life over death.

Today, York FlakIce is easing pain, preserving food and helping make life far from home bearable for our men at war. It, as well as many another York contribution in refrigeration and air conditioning, is doing its part to bring closer the day when such apparatus can once more serve the health and well-being of men at peace. York Corporation, York, Pennsylvania.

YOUR CUSTOMERS keep tabs on the part the York FlakIce Machine is playing in the war. Messages like this give a dramatic explanation of the military uses to which York peace-time equipment is being put. Regular insertions are appearing in FORTUNE, TIME, BUSINESS WEEK, NEWSWEEK, NATION'S BUSINESS, DUN'S REVIEW and in industrial papers.

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HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

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Refrigerants FOR TOMORROW'S REFRIGERATORS

LIQUID Sulfur Dioxide ANSUL* LIQUID Methyl Chloride ANSUL*

AVAILABLE IMMEDIATELY!

In large measure, the success of your automatic refrigerators depends on the efficiency and dependability of your refrigerants. Refrigerants are the "life blood" of refrigerators!

Ansul Liquid Sulfur Dioxide is an ideal refrigerant for household refrigerators, with a long and impressive record of trouble-free performance.

Ansul Liquid Methyl Chloride is recommended for small commercial units. Its performance record is equally excellent. Backed by pioneers in the field, Ansul refrigerants are clean, dry and pure. Ansul service is friendly and deliveries are dependable. Phone, wire or write today.



This Technical Book 3rd Edition on Ansul Refrigerants is still available. If you do not have a copy, send for one . . . it's free.

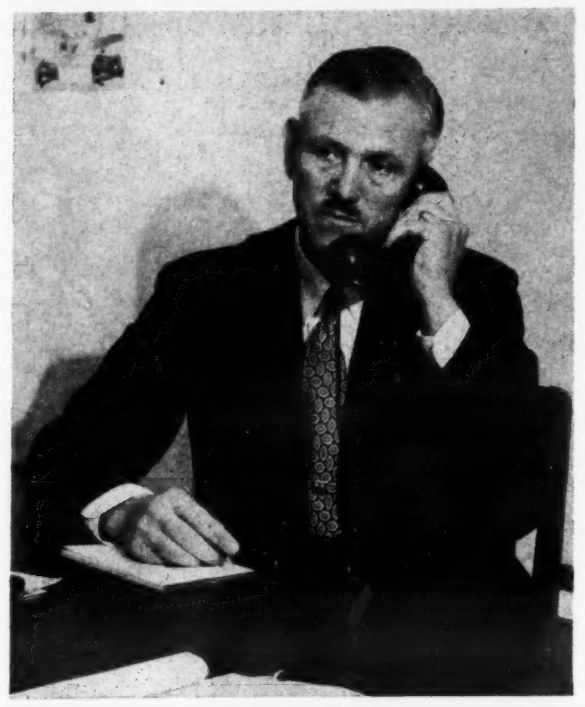
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Marinette, Wisconsin
Agents for Kinetic's "Freon-12" and "Freon-22"

Exclusive Service Firm Thrives on Wartime Increase of Repair Work

Ted Weeks Plans Commercial Line For Postwar Era



Ted Weeks, who operates a Frigidaire service agency in Kansas City, Mo., has steadily expanded his business during the war years, and now is making plans to enter the selling end of the business after the war with the Frigidaire commercial line.

KANSAS CITY, Mo.—While many refrigeration dealerships in this area (105 out of 170) have closed their doors since Pearl Harbor, Ted Weeks Refrigeration Co., Frigidaire service representative here, has steadily expanded its operations, and only recently moved into greatly enlarged quarters to prepare for a postwar boom.

Owned by Ted Weeks, the firm plans to branch out into the retailing end of the business after the war. Since the firm was started five years ago it has been exclusively a service organization, but future plans call for taking on the Frigidaire commercial line.

In the new building just taken over by the Weeks firm is a large salesroom, which is now being used as a schoolroom for training service men. After the war, however, it will serve as a display and salesroom.

"From our service work," Mr. Weeks declared, "we get an excellent picture of the shape of things to come in retailing refrigeration, and one out of every two of our repair customers tell us that they will be in the market for new units after the war. That is as good an indication as you can find of the postwar prospects."

The firm has 11 outside service men, and employs six men on the big second floor shop where most of the repair work is done. When the Kansas City Power & Light Co. eliminated its appliance service department, Ted Weeks employed the entire staff of 10 men the utility had in this section, and these men have made efficient replacements. The company also cooperates with the utility on refrigeration repairs and a heavy percentage of the business comes from this source.

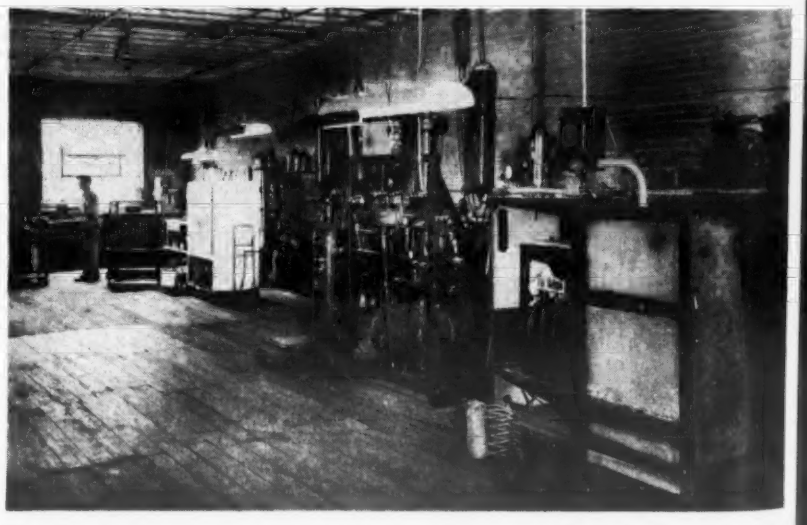
Service business handled by this firm currently is double that handled at the beginning of the war. In spite of the avalanche of business brought on by the war, the outside service men never make a repair customer wait more than 24 hours before receiving service. Most of the calls are made on an appointment basis, since 60% of the business is residential, and in many homes both the husbands and wives are working, and it is only by making appointments that service men can be assured of finding anyone at home.

The service men make the calls in their own cars and are paid for the use of their cars on a rental basis. Ted Weeds offers a 30-day guarantee on minor repair work and one year on major jobs.

In cases of motor trouble, Ted Weeks tries to induce the refrigerator owner to permit installation of rebuilt motors. When a customer calls in, detailed information is obtained of the complaint, and if it appears to be a motor failure, the telephone girl obtains the model number of the refrigerator. The repairman then takes the rebuilt motor used in this model along, and, if agreeable with the customer, installs it. The owner then pays the cost of

(Concluded on Page 33, Column 1)

Shop Equipment Speeds Repairs



Handling a large volume of repair work, Ted Weeks' Refrigeration Co. makes extensive use of shop equipment to facilitate servicing operations.



8 EXCLUSIVE FEATURES OF WHITE-RODGERS HYDRAULIC-ACTION TEMPERATURE CONTROLS

1. May be mounted at any angle or position, above, below or on level with control point.
2. Hydraulic-Action Principle incorporating solid-liquid filled bulb and capillary provides expansion force comparable to that of a metal bar.
3. Diaphragm motion uniform per degree of temperature change.
4. Power of solid-liquid charge permits unusually sturdy switch construction resulting in positive contact closure.
5. Heavier, longer-wearing parts are possible because of unlimited power.
6. Dials are evenly and accurately calibrated over their entire range because of straight-line expansion.
7. Controls with remote bulb and capillary are not sensitive to change in room temperature. Accuracy of control is not affected by temperature changes in surrounding area.
8. Not affected by atmospheric pressure. Works accurately at sea level or in the stratosphere without compensation or adjustment.



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Ordinarily the critical inspection of materials, parts and subassemblies, combined with the final calibration and operation tests which all White-Rodgers Controls undergo would seem ample assurance to the most exacting user.

But the White-Rodgers Engineering Department makes *doubly sure* that these controls are consistently accurate. Random samples are taken from each production lot before the controls reach you. These are again tested by a member of our Engineering staff under conditions simulating actual use. If the results of these tests do not measure up to the rigid test specifications, the whole lot of controls is rechecked.

You can make *doubly sure* too by specifying White-Rodgers Controls today!

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Two Big Warehouses to Serve You
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How Large Volume Is Handled



On the large second floor of the Ted Weeks' Refrigeration Co. well trained service men turn out dozens of repair jobs daily. Here a portion of the service staff is shown repairing household refrigerators.

* * *

Prompt (But Good) Service Builds Up Customer Goodwill, Weeks Insists

(Concluded from Page 32, Column 5)

the repair work necessary on the troublesome motor.

In order to offer this service, Ted Weeks keeps a large inventory of rebuilt motors on hand. He feels that by offering this service he is enabled to give the customer much quicker service, it removes the necessity for making two trips in order to complete the repair job, the need for loaning the customer a motor is eliminated, and the customer is not left without refrigeration.

SPACE IS DOUBLED

With twice as much space in the new building, the parts department alone occupies a space 25 feet wide by 50 feet long.

Sixty-five students are enrolled in Kansas City's new Emergency Training Program for Refrigeration Service Men, and Ted Weeks is one of the supervisors of the program. The company itself offers a two weeks brush-up course, because even in the midst of wartime confusion Ted Weeks insists that only thoroughly trained men be given places on his staff.

Telephone book advertising is the main promotional medium utilized by the company. One hundred percent of the firm's business comes over the telephone, and Ted Weeks notes that large display advertisements in the telephone book have, by test, proved most worthwhile of all promotions used. The young lady who handles the telephone is competent, knows mechanical details concerning refrigerators, and has a voice adapted to the telephone.

Already Ted Weeks is starting to look over prospects for his postwar sales staff which he will begin assembling just as soon as the war ends. But at the present time, the major emphasis is on giving repair customers fast service. If more men are needed to care for the increased business, then Ted Weeks insists that he'll find them someplace.

PEOPLE SYMPATHETIC

"People are as a whole sympathetic with the tough job we have," Mr. Weeks said. "They are willing to wait longer for repair work. They don't grumble if we don't give the brand of service that was possible in the days before Pearl Harbor. But there is an opportunity for a refrigeration man to build an abundance of goodwill by giving the customers good service—if you don't have to keep telling them that because of the war they'll have to wait. *C'est la guerre* is an over-worked term nowadays, and if you don't have to use it too often you can make many new friends. Friends who won't forget you after the war."

Although the firm will swing over to sales after the war, the service department will not be de-emphasized. The same stress on this section, which has placed the company among the service leaders in Kansas City, will be continued after the war.

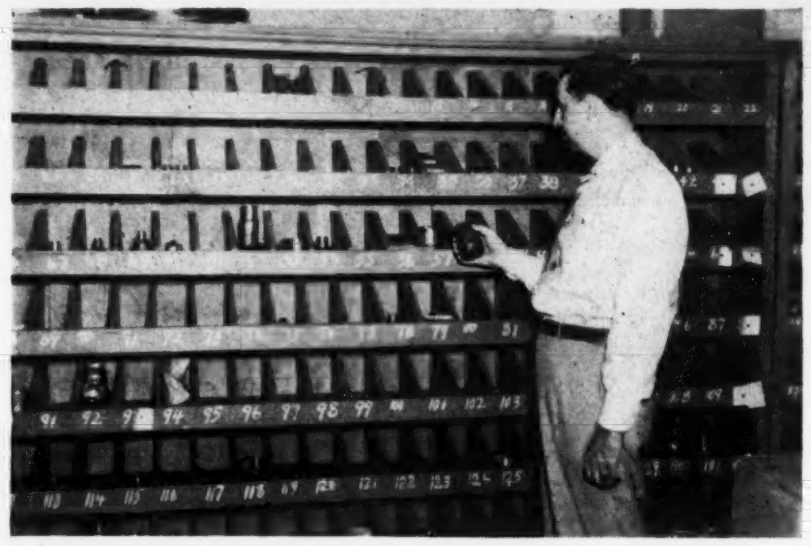
"As long as there is something mechanical about a refrigerator, they'll need mechanics to repair them. It'll always be our major department," said Ted Weeks.

Philco's War Output Jumps 50% in 1944

PHILADELPHIA — Philco Corp.'s production of war materiel for the Army and Navy, including principally radar and radio equipment, increased 50% in the first six months of 1944 as compared with the corresponding period last year, according to John Ballantyne, president, writing to stockholders in a letter accompanying Sept. 12 dividend checks.

"Present indications are that the rate of output achieved in the second quarter of this year, which represented a 10% increase over the first three months, will be maintained until Germany is defeated," Mr. Ballantyne said. "In recent weeks the company's output of artillery fuzes has been stepped up at the request of the Ordnance Department of the Army, and additional facilities at Watsontown, Pa., have been provided by he Government to increase this production still further."

'Lucky Numbers' for W. E. Nance



Stock bins at the Starr Co., commercial refrigeration parts distributor in Nashville, Tenn., are numbered to correspond to parts numbers shown in the company's catalog. W. N. Nance, proprietor, (shown above) says this method makes finding of parts so simple than even an inexperienced clerk has no trouble.

Your refrigeration parts and supply house in Central New York and Northern Pennsylvania

TED GLOU

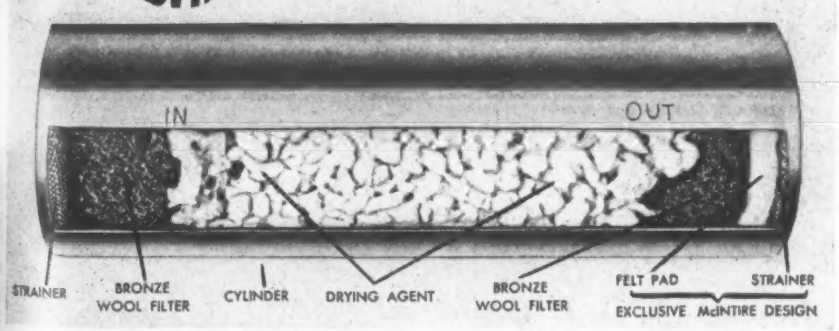
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WHY A **REPLACEABLE CARTRIDGE** IS THE BEST PROTECTION

Where systems require periodic inspection and removal of drier charge, a demountable shell and cartridge assembly is easier to refill—easier to keep clean. Danger of loose packing is eliminated. Special cartridges to meet aggravated acid or sediment conditions can be installed in the same shell. In sweat tube installations a side outlet shell with cartridge refills can be serviced by the removal of a single cap.

Why a DFN is the Best Replaceable Cartridge



A SINGLE DFN cartridge does THREE jobs. It DEHYDRATES. IT STRAINS and FILTERS. It NEUTRALIZES. The refrigerant is dehydrated and neutralized by a standard drying agent. An exclusive DFN strainer and filter assembly covers the COMPLETE area of the outlet with multiple layers of wire mesh, bronze wool and felt. It holds more sediment without pressure drop. It filters to minute size.

Semi-flexible DFN cartridges are easily installed and removed. DFN shells are easier to handle, last longer. They are simply constructed, with smoothly adaptable demountable flanges. DFN assemblies are manufactured in single and double flange models . . . in sizes for 1 H.P. to 30 tons, with a large safety factor. Get THREE-WAY PROTECTION with the DFN Cartridge. Sold by distributors everywhere.

McINTIRE CONNECTOR COMPANY NEWARK 5, N. J.

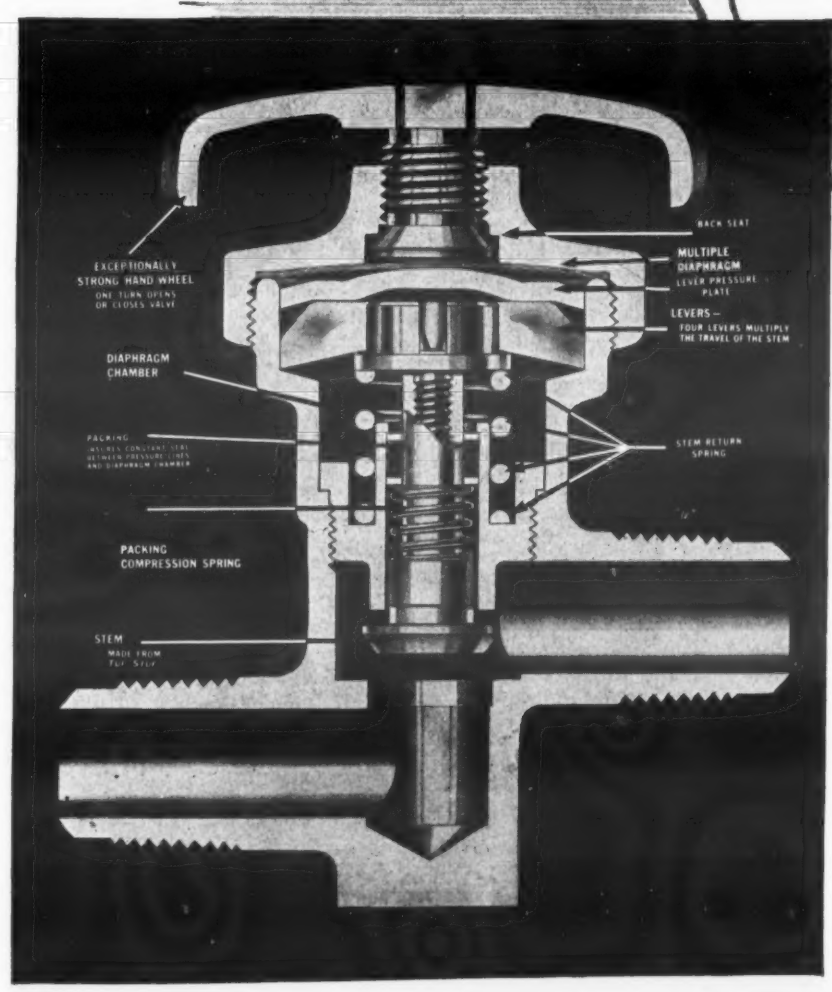
Only the **DFN** SYSTEM

DEHYDRATES FILTERS NEUTRALIZES

DEHYDRATORS • STRAINERS FILTERS • NEUTRALIZERS

Increased...

DIAPHRAGM LIFE PROLONGS THE SERVICE LIFE OF THE VALVE



Because of the small amount of movement, the multiple diaphragm in our TRIPL-SEAL Valve is never deflected past its normal center; thus immeasurably prolonging both its life and the life of the valve in service.

The multiple diaphragm has approximately 20% increased surface area over more conventional types of diaphragms. A single turn only is necessary to open or close the TRIPL-SEAL Valve.

TRIPL-SEAL

Positive sealing at three essential points in the valve is adequately provided for—a back seat with valve in open position,—the multiple diaphragms,—and a packing around the stem. (This packing insures constant seal between pressure lines and diaphragm chamber.)

The stem of the TRIPL-SEAL Valve is provided with a sixty degree bevel, thus procuring the most desirable wedging action for positive and easy closing. It is manufactured from Tuf-Stuf, a strong, corrosion-resistant alloy.

The stem does not rotate, and is constantly guided into the same position against the seat by a cylindrical guide, so processed as to eliminate any possibility of distortion.

The body and cap of the valve are forged brass to eliminate seepage and to withstand frost action; mounting lugs are forged integrally with the body to provide the ultimate in mounting strength.

The hand-wheel is exceptionally strong, and is so designed that it provides a convenient grip for manual operation.

Valves are furnished in two-way, three-way, and angle type—flared or solder type ends—and in complete range of all necessary sizes.

Order through your jobber.

MUELLER BRASS CO.

PORT HURON, MICHIGAN

ORDER THROUGH YOUR JOBBER... ONE SOURCE OF SUPPLY... SAVES YOU TIME AND MONEY

Servicing the G-E Refrigerator Line

Replacement Procedure

Machine Replacement (Cont.)

DA-1 and LK MACHINES

These machines cannot be removed from cabinet. When replacement is necessary, complete cabinet and machine must be replaced.

CB, CM-1, AND CM-2 MACHINES

1. Remove lid from top of cabinet.
2. Detach control escutcheon plate and control from front of cabinet.
3. Remove screws or nuts holding machine to cabinet. Top part of E-5 cabinet also must be removed.
4. Lift complete machine up and out of cabinet.
5. Install replacement machine by reversing previous steps.

(Continued on Page 35, Column 1)

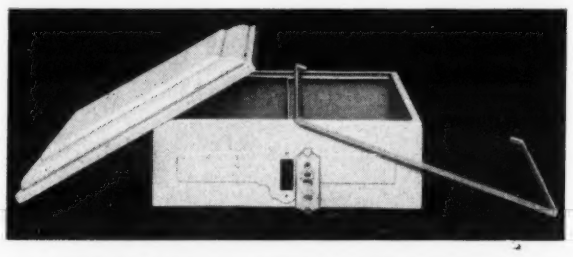


Fig. 59—Top of E-5 cabinet shown removed.

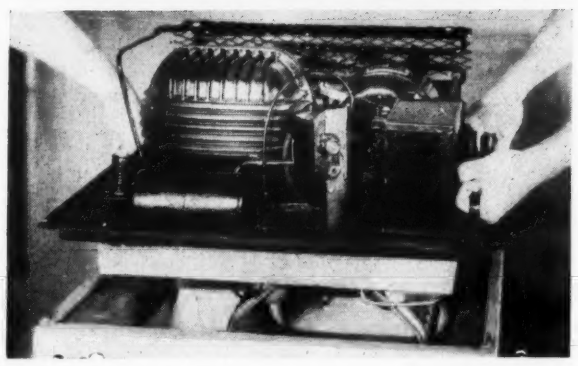


Fig. 60—Lifting machine off of E-5 cabinet.

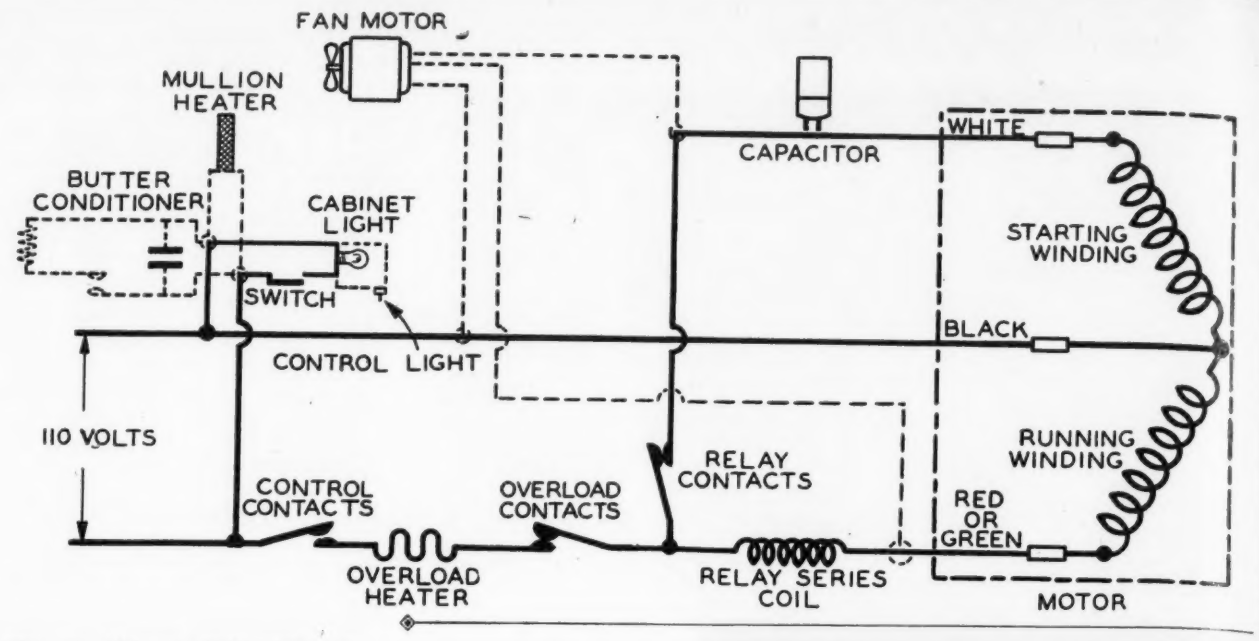


Fig. 64—(Above) Schematic wiring diagram for scotch-yoke machines with R relay. When installed, capacitor is in series with starting winding. When used, fan motor is across line beyond control contacts and runs only when machine runs. When installed, butter conditioner or mullion heater is across line.

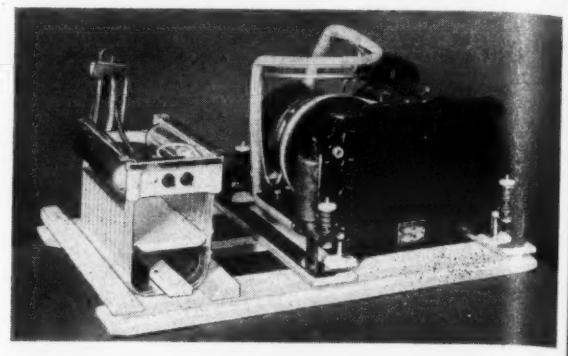


Fig. 61—This is how a replacement CD machine is shipped.

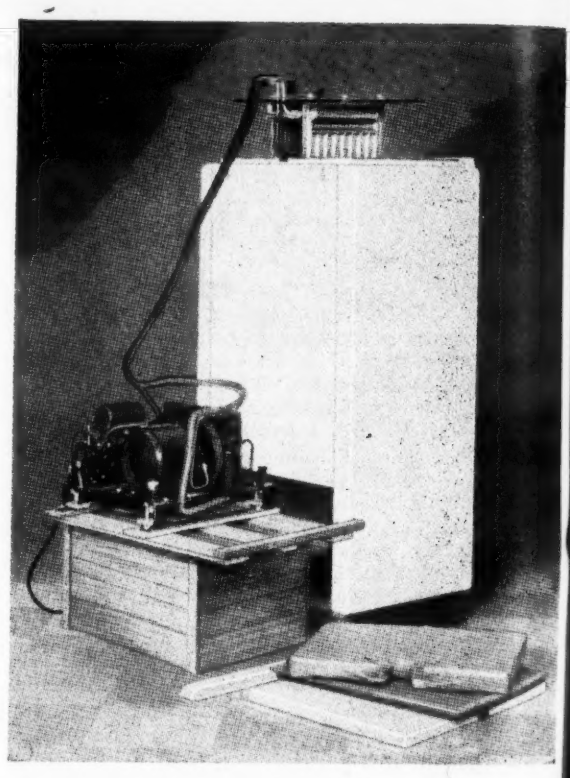
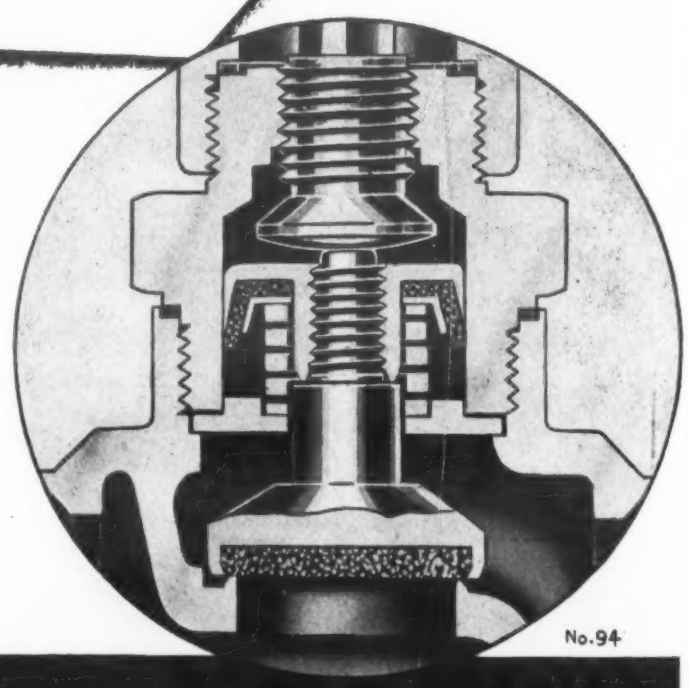


Fig. 62—Method of installing a replacement CD machine in cabinet is shown at right.



Superior PRESSURE CUP VALVES THE Inside STORY

The skirt of the pressure responsive cup—acting like the piston in an automobile tire pump—automatically forms a positive pressure seal, with the valve stem in any position. Eliminates packing "drag" and leaks prevalent with conventional packed valves.



. . . and that's not the *only* feature of these SUPERIOR Pressure Cup Valves!

1 Seal-cap gasket assures pressure-tight joint.
2 Pressure responsive cup forms positive seal.
3 Metal-to-metal backseat when valve is fully opened.
4 Wrench flats for easy removal of internal assembly.
5 Spring assures positive opening under pressure.
6 Generous openings assure against pressure drop.

Available in sizes through 2⅛" sweat and 2" F.P.T.

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No. 94

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PITTSBURGH 26, PENNSYLVANIA

OFFICES IN PRINCIPAL CITIES · WEST COAST STOCK: LOS ANGELES (15) · JOBBERS EVERYWHERE

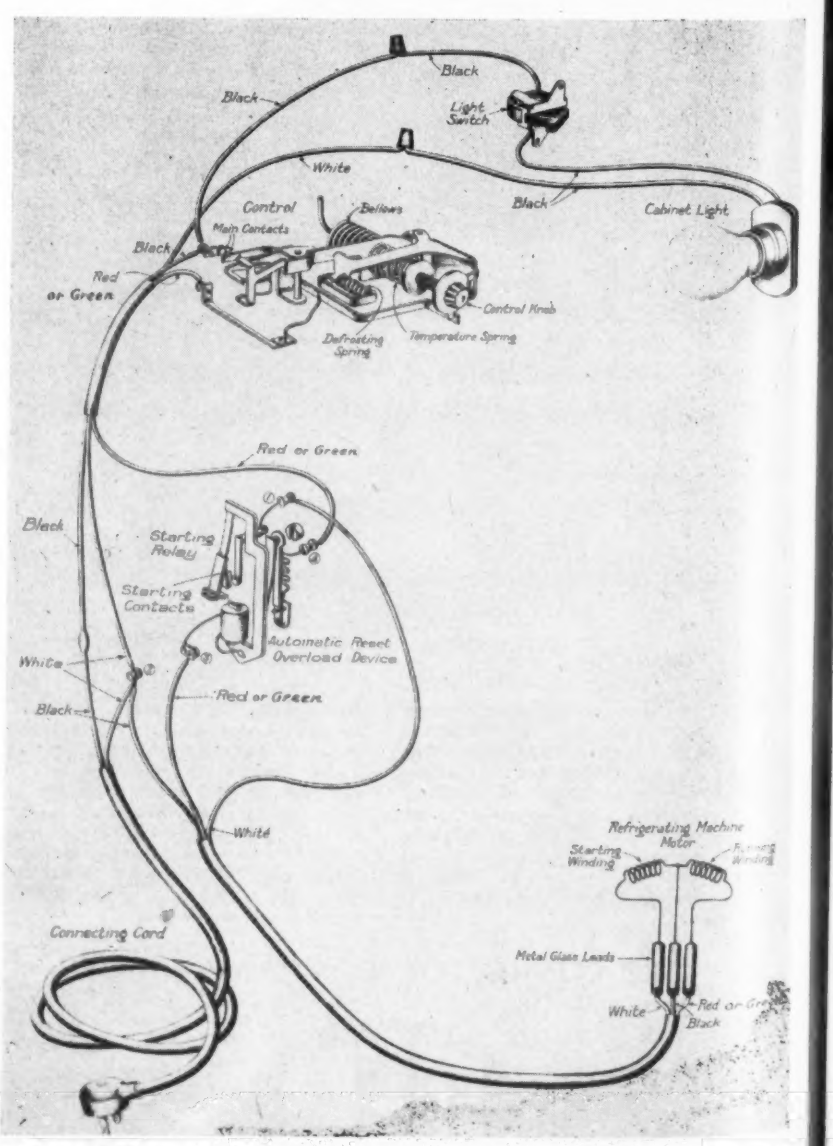


Fig. 63—Pictorial wiring connection diagram covering the following G-E machines: CF-1E, CF-2E, CF-28A, and CJ-1B (with R relay); CF-1F, G, and H; CF-2F, G, H, J, M, N, and R; CF-28B, C, D, and E; CJ-1C, D, and E; CJ-2A, B, C, D, E, and H; FBA-1A.

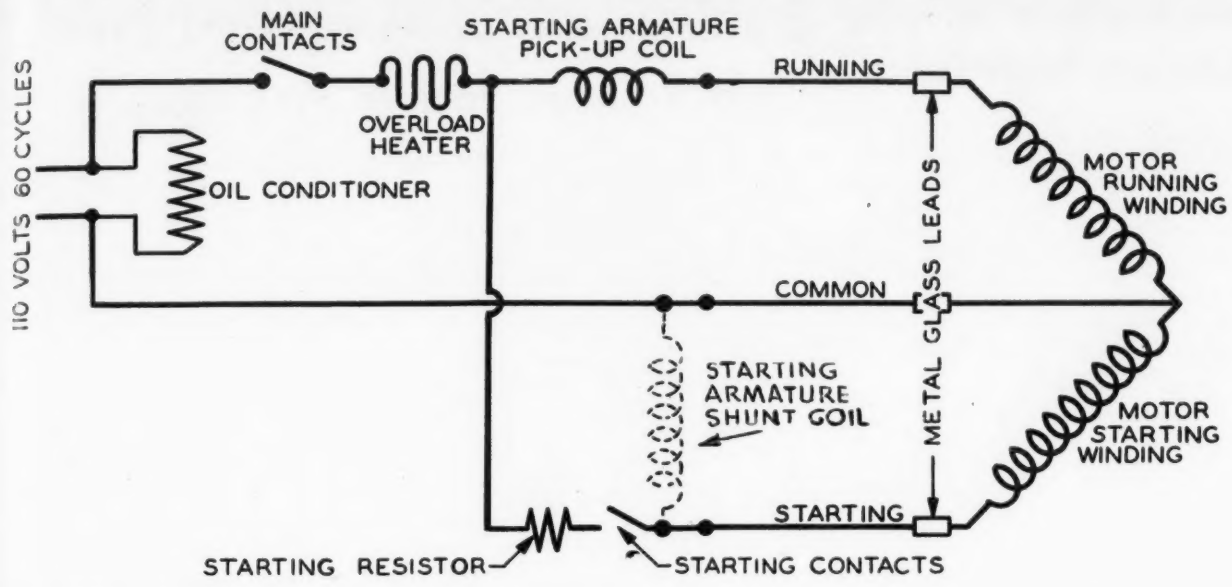


Fig. 66—(Above) Schematic wiring diagram for DR-1 and DR-2 machines. The starting armature shunt coil is installed only in Type E controls. The wiring for DR-3 and DR-4 machines is similar.

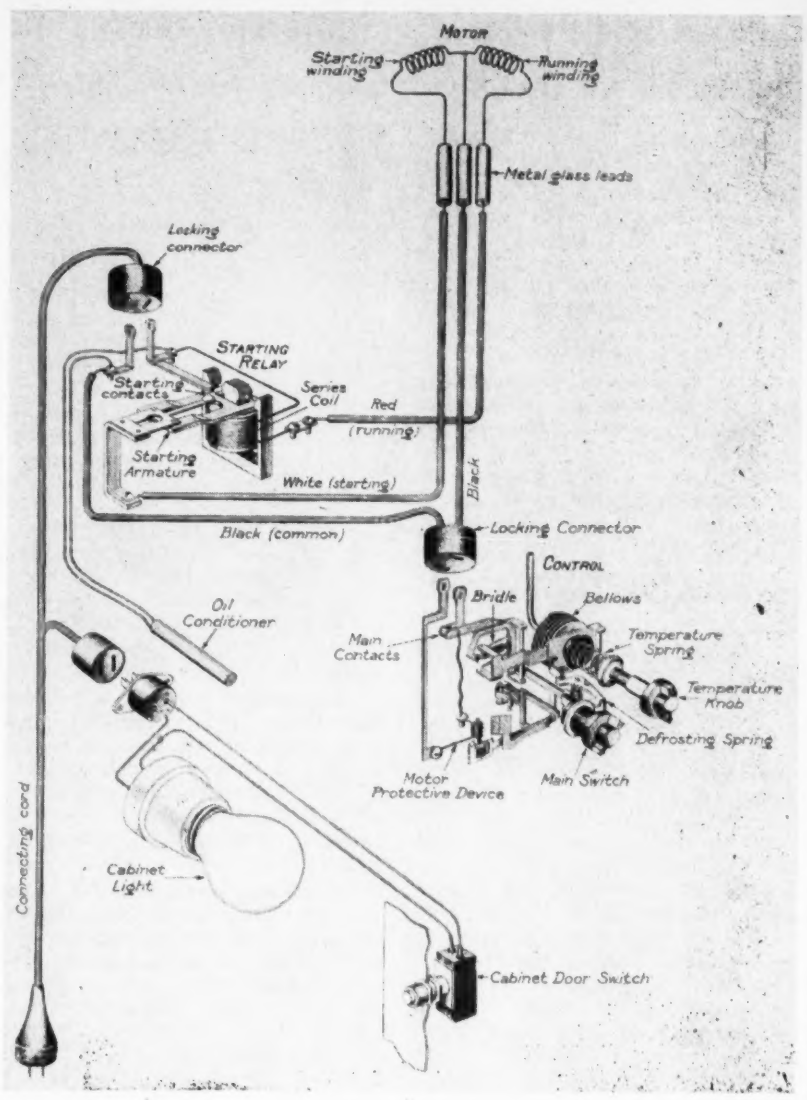


Fig. 65—(Right) Pictorial wiring connection diagram for CA machines. Original control and relay are shown. Wiring connections with Type R relay will be shown later.

Servicing the G-E Refrigerator Line

(Continued from Page 34, Column 2)

CD, CM-32, CM-33, AND CM-34 MACHINES

1. Remove evaporator door if there is one installed.
2. Remove cabinet top cover and insulation.
3. Disconnect leads to cabinet light and switch.
4. Remove screws holding cabinet top plate to cabinet liner walls.
5. Remove shipping blocks and shipping bolts from replacement machine and install them on motor-compressor assembly of machine being replaced. This must be done to hold motor-compressor assembly in place while being moved.
6. Remove screws or bolts holding machine to cabinet frame.
7. Open lower front panel of cabinet or remove dry storage drawer if there is one.
8. Slide motor-compressor assembly out of back of cabinet and lift onto box.
9. Lift evaporator assembly up and out of top of cabinet. Be careful not to kink tubing.
10. Remove cabinet top-plate from evaporator assembly.
11. Bolt inoperative machine to skid in the same manner replacement machine was shipped and place it in crate.
12. Place replacement machine on box at rear of cabinet.
13. Install cabinet top-plate on replacement machine.
14. Install evaporator assembly, then motor and compressor assembly in bottom of cabinet, by reversing previous steps.

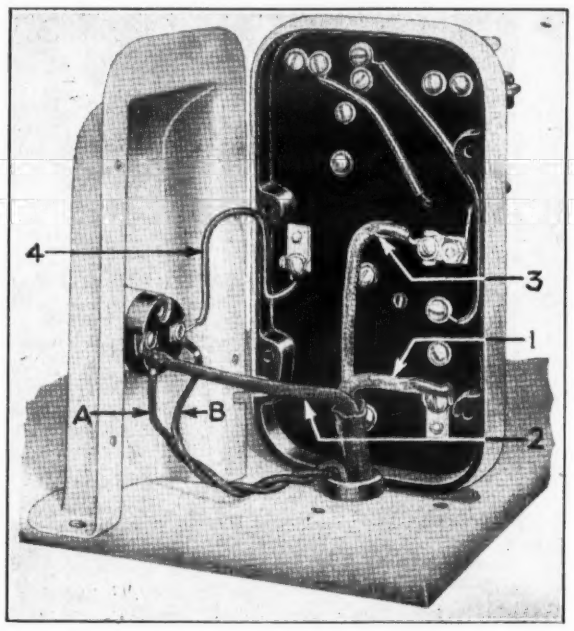


Fig. 67—Connections for DR-2 machines with Type A control. Key to wiring is as follows:

1. Short white lead—starting winding.
2. Medium length black lead—common.
3. Long red or green lead—running winding.
4. Main line connection.

A-B Oil conditioner leads.

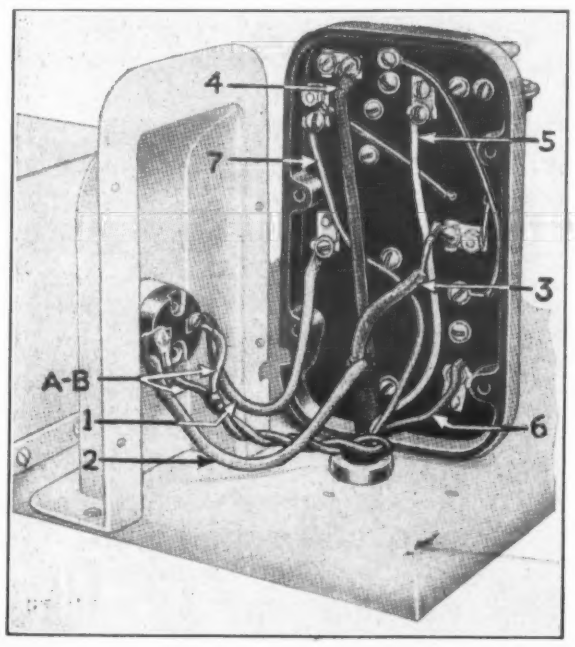
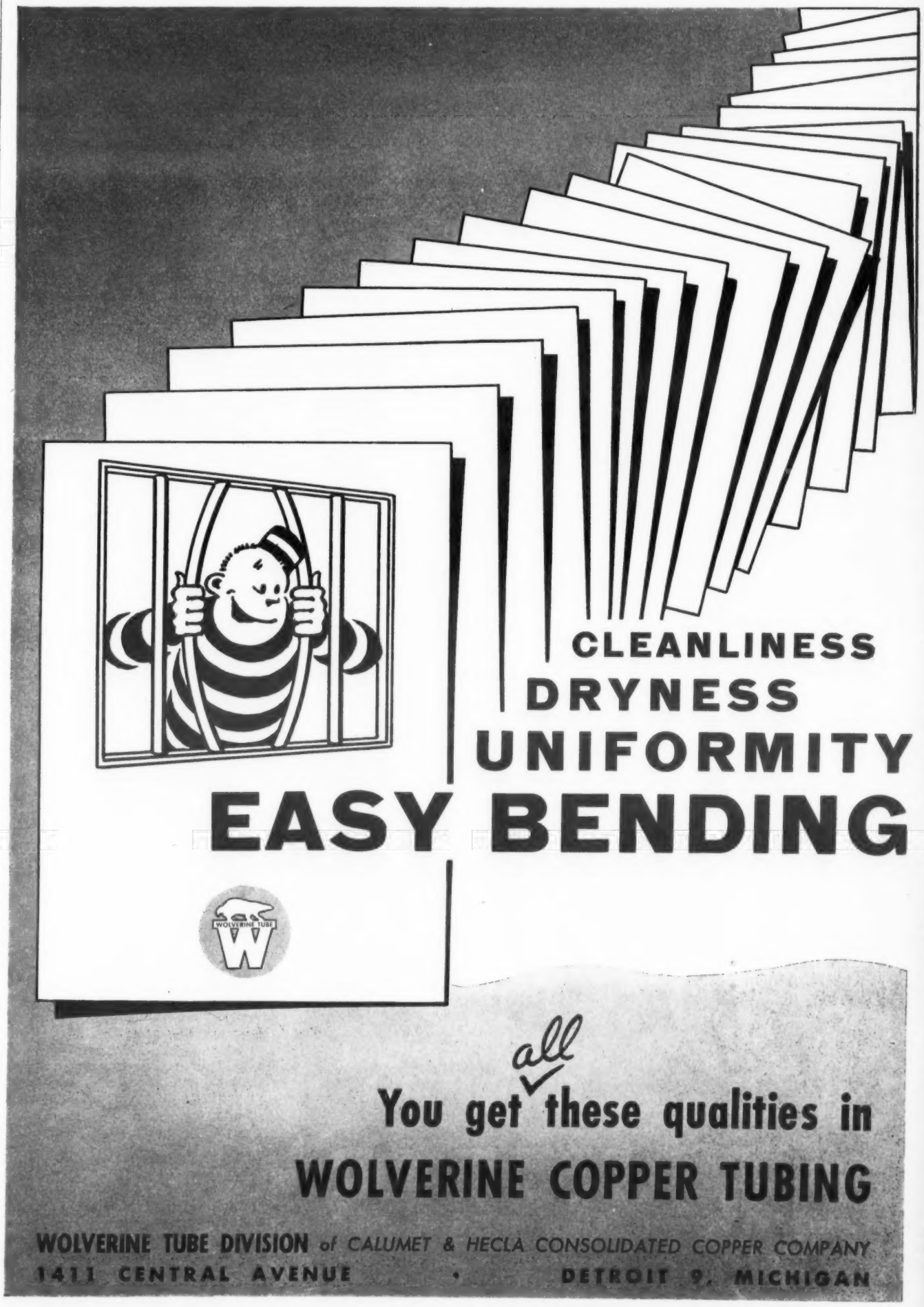


Fig. 68—Connections for DR-3 and DR-4 machines with Type A control. Key to wiring follows:

1. Main line connection.
2. Large red or green lead—common.
3. Large white lead—running winding.
4. Large black lead—starting winding.
5. Small white lead—capacitor.
6. Small black lead—capacitor.
7. Small red or green lead—capacitor.

A-B Oil Conditioner leads.



So. Pacific Soldiers Get 'Homemade' Ice Cream

WASHINGTON, D. C. — Many American soldiers in the Southwest Pacific are now eating "homemade" ice cream. Many more will soon be doing so, for the Office of The Quartermaster General has developed a lightweight ice cream making unit, which is being shipped to all theaters of operation in the Pacific. It is self-contained and portable.

A rich, wholesome, prepared ice cream mix, to which only water need be added, is whipped up, frozen and then poured into individual containers, all in a matter of minutes, then placed in the ice cream machine.

Frozen Milk Developed By Pennsylvania College

STATE COLLEGE, Pa.—A method for manufacturing frozen concentrated milk has been developed by researchers at Pennsylvania State College. Taste tests indicate that the product when "reconstituted" can hardly be distinguished from fresh milk. It can be defrosted and diluted by putting the frozen blocks directly into hot water.

By using an equal amount of water, a product resembling coffee or cereal cream is produced. Twice as much water is added when milk for beverage purposes is desired. The product is being investigated by the armed forces as a possible source of fluid milk on hospital ships.

'Strato-Flo' Coolers Claimed To Minimize Water Warm-up Time

LOS ANGELES — Designed to minimize warm-up periods and keep water out of refrigerant lines, a new line of "Strato-Flo" water coolers featuring a simplified method of control has been announced by Drayer & Hanson, Inc. here.

Water storage tank in the "Strato-Flo" line is wrapped with the refrigerant coil to provide continuous cooling action. Interior of the water tank shell is fitted with vertical fins intended to prevent swirling action and confine in-coming warm water to the upper portion of the tank. These fins keep the warm water from mixing with the cold water at the bottom of the tank and thus minimize warm-up, the company claims. Fins also provide additional heat exchange surface.

Because the water does not come into direct contact with refrigerant line, danger of wet systems is eliminated and control is non-critical, it is said. Control system consists of an automatic expansion valve and external adjustable thermostatic switch.

Models are available in 3½, 7, and 12½-gal. capacities, and all are equipped with interchangeable alternate faucet units in bubbler, lever handle glass filler, and push back glass filler styles. Washers may be replaced and dispenser units interchanged without shutting off water. Tank models are also available in the same sizes.

New Alco Water Valve Has Automatic Waste Control

ST. LOUIS—A new metering and automatic waste valve for water supply lines to unheated areas, especially to spray nozzles, has been announced by Alco Valve Co., manufacturer of refrigeration control valves. The new type valve provides two services in one compact assembly—it offers an automatic drain to prevent freezing, and at the same time provides metering means.

Such an arrangement for automatic draining is desirable where spray nozzles on evaporative condensers are located in unheated areas, on supply lines to roof ponds and spray nozzles, and supply lines to outside sill-cocks, etc.

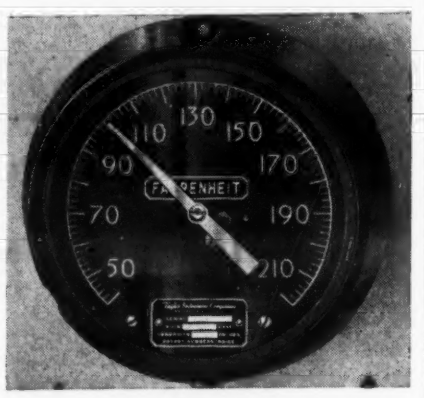
It is ordinarily used in conjunction with a standard solenoid valve which may be controlled by outside thermostats, timers, or any other desired means. Both the solenoid and the metering and automatic waste valve should be installed in a heated area.

If automatic action is not desired, an ordinary hand shut-off valve may replace the solenoid. In this case, the automatic waste feature will function when the hand valve is turned off. The capacity metering stem is designed for external adjustment.

Shock-Resistant Dial Thermometer Added To Taylor Line

ROCHESTER, N. Y.—Available in a wide variety of standard temperature-sensitive bulb contructions and temperature ranges, a 4½-inch Phenolic case remote reading dial thermometer has been introduced by Taylor Instrument Companies here.

This mercury actuated instrument, originally built for, and extensively used by, the shipbuilding industry, is claimed to be built to withstand severe operating conditions. The



plastic case is said to be resistant to corrosion and shock. The metal dial is finished in black with white figures to make reading at a distance easy.

The 53K series thermometer, available with "Accuratus" tubing for remote installation comes in the following temperature ranges: —40° to 120° F., 40° to 220° F., 350° to 550° F., 400° to 900° F., —10° to 110° F., 80° to 300° F., 300° to 750° F., 30° to 150° F., 50° to 400° F., and 200° to 900° F.

Formica Probes New Uses For Laminated Plastics

CINCINNATI—While a fast-paced war quota, limited only by plant capacity and manpower, is being maintained by the Formica Insulation Co., manufacturers of laminated products being used on fighting aircraft and other wartime uses, research engineers of the company are probing the postwar possibilities for application of war-improved product.

J. Roger White, vice president, reports that some new applications in the postwar automotive field are already spurring interest. A method has been worked out, White said, by which laminated plastic material produced by Formica can be quickly and simply attached to auto door interiors.

Admiral Expands CBS Program

NEW YORK CITY—Admiral Corp. of Chicago, manufacturer of appliances and radios, has increased its "World News Today" radio program from 43 to 61 Columbia Broadcasting System stations. Cruttenden & Eger handles the account.

Big Shipments of Meat, Lard Ease Cold Storage Jam In August

WASHINGTON, D. C. — Shortage of U. S. public cold storage facilities, which has been critical for several months, eased up slightly during August, the War Food Administration has reported, although certain controls are still in force to insure complete use of all facilities.

Most significant factor in the picture was the out-of-storage movement of meats and lard. A total of 166,900,000 pounds of meat and 99,000,000 pounds of lard moved out during August for civilians and war export uses, WFA's report showed. This out-movement was noticeably heavier than during any comparable period in recent years. It left total meat stocks of 740,300,000 pounds in storage—477,200,000 pounds of it in freezers and the rest in coolers, WFA said.

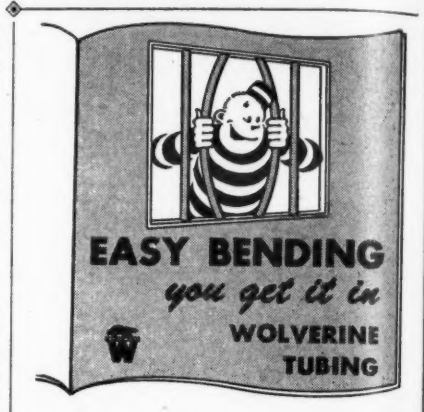
Despite this heavy out-movement, however, total stocks of meats in storage as of Sept. 1 were 15,500,000 pounds above a year ago, and 168,400,000 pounds higher than the five-year (1939-43) average. The increases were registered in frozen and cured beef, lamb, mutton, and lard, while the holdings of pork were about 7,500,000 pounds less than a year ago.

The out-movement of eggs was less than half as great as during August of 1943, with 2,126,000 cases of shell and frozen eggs moving out. Holdings on Sept. 1 were 900,000 cases greater than a year ago, and holdings of dried eggs increased by 12,900,000 pounds during August.

Holdings of American cheese decreased during August, but total cheese holdings increased by 4,900,000 pounds. The into-storage movement of poultry was 18,300,000 pounds for the month.

Cold storage warehouses on Sept. 1 held 246,000 bushels of apples, compared to 221,000 a year ago, and pears held were 3,921,000 bushels—2,199,000 bushels more than Sept. 1, 1943.

Total cooler occupancy on Sept. 1 was 81% of capacity, WFA said, with 1,981,000,000 pounds of all commodities stored. Freezer occupancy of 89% reflected commodity holdings of 1,685,000 pounds.



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Limited quantities are now being shipped United distributors. If your supplier's shelves are still empty, write us—we'll arrange to have your needs taken care of promptly.

Manufactured and sold under license from the Davison Chemical Corporation under U. S. Patents 1,772,055; 1,773,273; 1,900,859 and others.

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CABINETS

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All Prime Surface Cooling Coils — Copper or Steel

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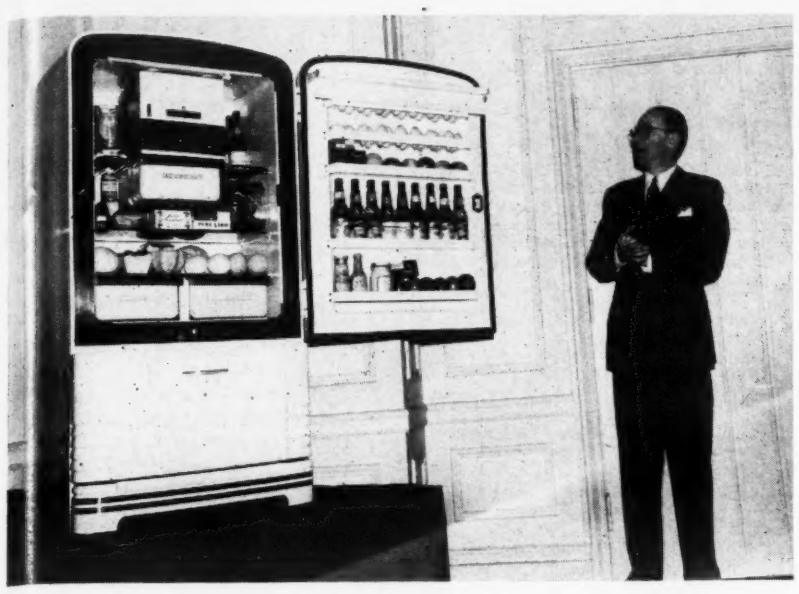
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First Postwar Model To Be Shown?



"Lee Stratton, manager, refrigeration department, The Crosley Corp., demonstrating the refrigerator at Crosley C-Day sales conference" is all the information that was advanced by Crosley relative to this picture. In light of the pronouncements by officials at the meeting, however, it may be surmised that this is the refrigerator that Crosley will produce and sell as soon as they are permitted to get into production on civilian items. One curious feature (barely discernible in this reproduction) which may or may not be standard equipment, is what appears to be a window shade at the top of the Shelvador.



Crosley distributors and factory executives both seem happy over the postwar plans they are discussing in this picture taken at the Crosley C-Day conference. Left to right are R. Paul Burns, president, Judson C. Burns, Inc., Philadelphia; L. A. Wells, manager, Western Merchandise Distributors, Buffalo; R. C. Cosgrove, Crosley vice president and general manager; and S. D. Mahan, director of advertising and public relations.



L. E. McCurry (center), sales manager of Heating & Air Conditioning Supply Co., Inc., Reno, Nev. with (left) L. C. Truesdell, sales manager, commercial division, Crosley Corp. and (right) N. B. Dinkel, Pacific Coast regional manager.

'Gene' Dahl Joins Radio Specialty In Postwar Expansion Move

MILWAUKEE — As part of its postwar expansion planning, Radio Specialty Co., appliance and radio distributor here, will add H. E. "Gene" Dahl to its staff Oct. 15 to concentrate on building up retailers' selling organizations, announces A. Van Antwerpen, president and general manager.

Mr. Dahl has had 20 years' experience in retail selling, and for the last nine years managed one of the largest retail appliance departments in the Wisconsin area, said Mr. Van Antwerpen. He will work under L. V. Kelly, vice president in charge of sales.

Radio Specialty expects to double its prewar sales force and plans to add lines of washing machines, ironers, electric ranges, vacuum cleaners, space heaters, kitchen cabinets, etc.

Founded in 1922, the company was first an exclusive radio house, handling Atwater Kent. In the early thirties, the firm took on refrigerator lines, and became a Philco distributor in 1932. Since Philco introduced its "all year around" program the company has been over 100% of quota on all Philco products.

Despite the war, "we have never for one minute lost confidence in the future of the specialty distributor," declared Mr. Van Antwerpen. "We feel that we can perform a service to both our manufacturers and our dealers that will more than justify a legitimate distributor's profit.

"We believe there is a big difference between a real specialty appliance distributor and the ordinary wholesaler or jobber who acts primarily as a warehouse to supply a demand that must be created and fostered by the manufacturer."

Hamilton Mfg. Co. To Make Clothes Dryer

TWO RIVERS, Wis. — An automatic clothes dryer claimed to damp-dry (ready to iron) an average washer load of clothes in 15 to 25 minutes will be marketed nationally after the war by the Hamilton Mfg. Co. here, producer of professional furniture.

The unit will hold a maximum washer load of nine pounds of dry clothes and up to 18 pounds of wet clothes in one load, and is equipped with a thermostat which automatically controls the heating element to prevent damage to clothes, the company says.

To be made with either gas or electric heating elements, the dryer has an electric drive requiring no lubrication. The unit is of steel construction with white Dulux finish. Both models have the same dimensions: 39 in. high by 31 in. wide by 25 in. deep.

Midwest Jobber Meeting Draws 28 Members

KANSAS CITY, Mo.—Changes in WPB regulations, deliveries, and merchandise were discussed when the Midwest Refrigeration Supply Jobbers Association held a one-day meeting at the President Hotel here recently.

Twenty-eight jobber members, 34 representatives of manufacturers, and Miss Mary Silvers, assistant to the executive secretary of the national jobbers group, attended.

Waite Heads Penn's New Dallas Office



RAY P. WAITE

* * *

DALLAS, Texas—Penn Electric Switch Co. has opened a branch sales office in the Wilson Building, Dallas, which will be managed by Ray P. Waite.

Mr. Waite, a graduate mechanical engineer, was in the public utility business until 1932 at which time he was vice president and general manager of a midwest utility company. Since 1932 he has been engaged in consulting engineering, sales, and product research work.

U.S. Offers New Issue Of Price Ceiling Guide

WASHINGTON, D. C.—Copies of a new official guide on commodities and services under price ceilings, with a directory of the key operating officials of the various price units in OPA's National Office at Washington, D. C., were made available to industry and the public generally on Oct. 1, by the Office of Price Administration.

Although the listing of commodities and services covers approximately 6,000 items, and includes the main commodities or groups of commodities under price control, it is necessarily not a complete list, said OPA.

Published at intervals, this directory has been found of service to business firms and individuals in helping them to determine under which price regulations or branch a particular commodity or service falls, the numbers and titles of these regulations, and the operating officials in charge of administering them. Regulations dealing with rationing, and the key operating officials in the rationing departments, are not included in the directory.

This booklet is being distributed free to key members of OPA's staff in the National Office and in the field. All other Government departments interested, as well as industry and the public generally, should send requests for copies to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. A charge of $1 will be made for each booklet to cover cost.



Illustration is from Inland poster showing operation in the production of the Inland-made Fire Extinguisher Horn

The Inland-made Fire Extinguisher Horn is an important part of the fire extinguisher used on U. S. Naval Ships. Its development and production in record-breaking time is a striking example of Inland's engineering resourcefulness in the field of laminated plastics.

Early in 1943, Inland was asked to apply its experience in the development of plastic Helmet Liners to the production of an Extinguisher Horn. 60 days thereafter Inland started production on improved Extinguisher Horns which were twice as strong as the Navy's requirements. Since that time Inland improvements have made the horns still sturdier, eliminated a finishing operation, increased their utility and reduced their cost.

The Fire Extinguisher Horn is one of many Inland products for Victory, which are helping Americans carry the attack to the enemy everywhere.



INLAND MANUFACTURING DIVISION, *General Motors Corporation*, DAYTON, OHIO



INLAND

INLAND *Manufacturing*

RUBBER, METAL, PLASTICS

Inland Products for Victory include Carbines, Tank Tracks, Gun Sights, Helmet Liners, Extinguisher Horns, and Rubber, Synthetic Rubber and Metal Parts for Tanks, Aircraft, Submarine Chasers, Torpedo Boats, Artillery Lighters and Landing Craft.

Designers and Manufacturers of
Thermostatic Expansion Valves;
Pressure Regulating Valves;
Solenoid Valves; Float Valves
ALCO VALVE COMPANY • ST. LOUIS, MO.

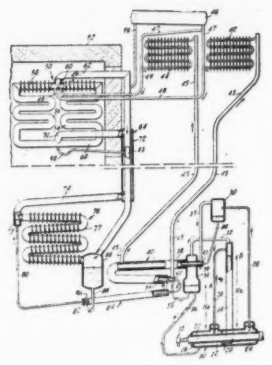
In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber
since 1928
Your letterhead will bring our latest catalog—also our House Organ,
"The Liquid Line"
RS
3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

DOLE
VACUUM PLATE
COOLING and FREEZING UNITS
CHICAGO

PATENTS

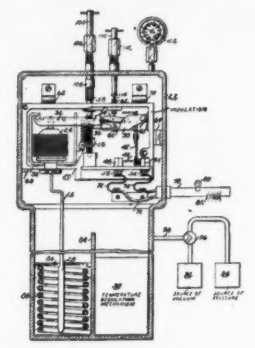
Weeks of Sept. 5 & 12

2,357,340. REFRIGERATION. Charles A. Miller, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Oct. 4, 1941, Serial No. 413,584. 7 Claims. (Cl. 62—119.5.)



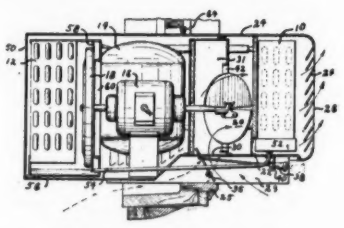
4. In the art of refrigeration wherein a continuous stream of fluid absorbent is passed to a place of heating where the refrigerant is expelled therefrom, the steps of expelling a first stream of refrigerant vapor from the fluid absorbent, expelling a second stream of refrigerant vapor from the fluid absorbent, passing said first stream of refrigerant vapor in counterflow contact with the stream of fluid absorbent and thence to a first condenser, passing said second stream of refrigerant vapor in heat exchange relationship but out of contact with the stream of fluid absorbent and thence to a second condenser, and delivering the condensate from the two condensers to separate evaporator sections to thereby produce substantially independent refrigerating effects in the two evaporating sections.

2,357,353. METHOD AND APPARATUS FOR TESTING THERMOSTATIC CONTROL DEVICES. George C. Pearce, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Jan. 28, 1941, Serial No. 376,363. 13 Claims. (Cl. 73—51.)



10. A testing apparatus for adjustable thermostatic control devices having thermo-sensitive and pressure elements for actuating the control element comprising a sealed casing having an access opening and a sealed cover for the opening, a support within the casing for said control devices, a constant temperature means for the thermo-sensitive element, means for varying the pressure within the casing for varying the external pressure upon the pressure element, means for indicating the pressure within the casing, said casing being provided with means extending from the interior to the exterior of the casing in a fluid sealed manner for setting the adjustable feature of the control device, said casing being provided with a window for observing the operation of the control element.

2,357,362. REFRIGERATING APPARATUS. Nelson J. Smith, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application April 30, 1940, Serial No. 332,471. 5 Claims. (Cl. 62—140.)

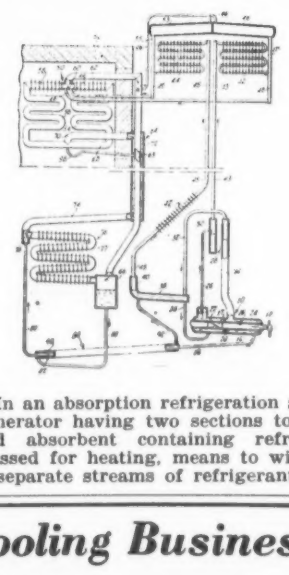


1. In a window air conditioning unit, a cabinet adapted to be disposed directly within the window opening, a refrigerant evaporator within said cabinet, refrigerant liquefying means for supplying refrigerant to said evaporator mounted within said cabinet, an air inlet opening in the bottom of said cabinet, blower means for circulating air in through said opening over said evaporator and out into the space to be conditioned, means for introducing outside air into said air inlet opening, and means for controlling the ratio of fresh air and recirculated air flowing through said air inlet.

2,357,431. REFRIGERATION. Thomas K. Sherwood, Cambridge, Mass., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. No Drawing. Application Feb. 24, 1941, Serial No. 380,305. 7 Claims. Cl. 252—69.)

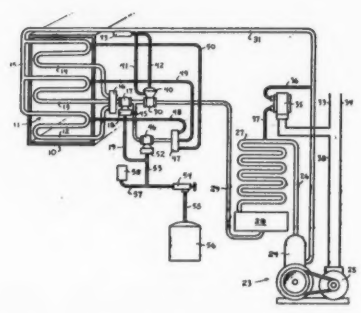
1. An absorption refrigeration system employing water as refrigerant and an ethylene amino compound having a boiling point above 100° C. as absorbent.

2,357,612. REFRIGERATION. Walter W. Soroka, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Oct. 4, 1941, Serial No. 413,577. 18 Claims. (Cl. 62—119.5.)



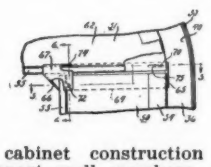
7. In an absorption refrigeration system, a generator having two sections to which liquid absorbent containing refrigerant is passed for heating, means to withdraw two separate streams of refrigerant vapor from the respective sections of said generator and to condense the two streams of refrigerant vapor to thereby provide two separate streams of liquid refrigerant, a single heating element for distribution of the heat from the said generator, and means to control the single heating element to the separate sections of the generator thereby to regulate the relative amounts of refrigerant supplied to each stream of liquid refrigerant.

2,357,758. REFRIGERATION CONTROL SYSTEM. Alwin B. Newton, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application April 27, 1940, Serial No. 332,001. 8 Claims. (Cl. 62—8.)



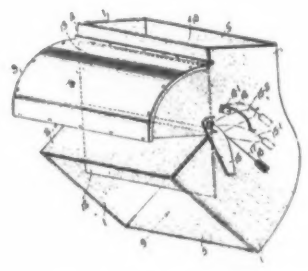
8. In a refrigerating system, the combination of an evaporator having a plurality of conduits each having an inlet and an outlet, a refrigerant distributor connected to the inlet of each conduit, a single expansion valve for controlling flow of liquid refrigerant to the distributor, said single expansion valve including an element responsive to the temperature of the vaporized refrigerant discharged from the evaporator, means for withdrawing a restricted flow of liquid refrigerant from a portion of the refrigerating system containing liquid refrigerant at a pressure intermediate that of the supply and the refrigerant pressure existing in the evaporator, said portion being between said valve and the inlets of said conduits, and supplying said withdrawn refrigerant to at least one of said conduits at a point remote from the inlet thereof, valve means whereby the flow through said withdrawing means is modulatingly controlled, and means responsive to a condition brought about by evaporation of refrigerant in said evaporator controlling said last mentioned valve means.

2,358,221. REFRIGERATING APPARATUS. Earl D. Drake, Grand Rapids, Mich., assignor to Nash-Kelvinator Corp., Detroit, Mich., a corporation of Maryland. Application Oct. 16, 1941, Serial No. 415,185. 3 Claims. (Cl. 220—9.)



1. A cabinet construction comprising spaced apart wall members, a vertically extending breaker strip extending across said wall members, a horizontally extending breaker strip extending across said wall members with an end portion in close proximity to an end portion of the vertically extending breaker strip, each of said breaker strips being provided with a longitudinal turned edge portion, a relatively thin metallic member extending across the space between said end portions, means formed adjacent one end of said member to lie between the end portions of said adjacent breaker strips for alignment of said member thereover, opposite end of said metallic member extending beyond the longitudinal turned edge of said vertical and horizontal breaker strips, and means on said extended end for locking engagement with the free edge of said longitudinal turned edge portion of each of said breaker strips.

2,358,260. ATMOSPHERIC AIR FLOW REGULATOR. George T. Simpson, Detroit, Mich. Application April 15, 1941, Serial No. 388,663. In Canada June 8, 1940. 8 Claims. (Cl. 137—152.)



1. A fluid flow regulator including a passage having an inlet at one end, an outlet at its other end and a pair of oppositely disposed walls one of which is curved gradually towards said opposite wall in a direction towards the outlet, a damper having a width substantially equal to the width of the passage pivoted adjacent said opposite wall and arranged to swing through an arc approaching ninety degrees toward said outlet by the force due to the velocity of the fluid entering said inlet, counterbalance means arranged to balance the damper under static conditions, counterforce means arranged to resist movement of the damper under flow conditions and maintain the damper with its free edge directed toward said inlet and forming with the inflowing air an angle approaching forty-five degrees under minimum fluid velocity conditions, the curvature of the wall and the counterforce means being so coordinated that the product of the area, formed between the free edge of the damper and the curved wall at fluid velocities in excess of the minimum, and the velocity producing such area is maintained substantially constant.

Admiral Names 3 As Distributors

CHICAGO—Appointment has been announced by Ross D. Siragusa, president of Admiral Corp., of three additional distributors: Appliance Merchandisers Co. of Peoria, Ill.; the Bimel Co. of Cincinnati; and the Griffith Distributing Corp. in Indianapolis.

Appliance Merchandisers Co. is a division of the Rockford Lumber & Fuel Co., organized in 1890, which has been distributing appliances since 1933. Edwin R. Keeler is president of the company, and William V. Porter heads the appliance division.

The Bimel Co., one of the largest commercial refrigeration and air conditioning distributors in the Cincinnati territory, was established in 1935 by Carl and Fred Bimel. Guy Haig, formerly Crosley branch manager in Cincinnati, recently joined the firm to head its appliance department.

Organized in 1929, Griffith Distributing Co. handled Admiral radios and Stewart-Warner appliances before the war. Officers of the firm are C. W. Hyde, president; G. F. Hyde, vice president and secretary; William C. Griffith, treasurer; and F. J. Hartmann, assistant treasurer.

N.E.W.A. Plans 1945 Meeting

NEW YORK CITY — Charles G. Pyle, managing director of the National Electrical Wholesalers Association, reports that the thirty-seventh annual convention of that Association will be held during the week of April 22, 1945 at The Stevens, Chicago, Ill.

The convention will be held only if it appears to be advisable according to the situation at that time with regard to transportation facilities.


Send for Bulletins on Wagner ELECTRIC MOTORS
MU-182 and MU-183
Wagner Electric Corporation
M44-2 6441 Plymouth Ave., St. Louis 14, Mo., U.S.A.


Use CHICAGO SEALS
for seal replacements
A complete line in all sizes
CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

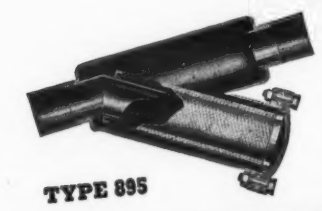
La Crosse Beer Dispensing Equipment with a National reputation for Quality and Performance.
La Crosse Novelty Box Mfg. Co.
LA CROSSE, WISCONSIN

HEAT TRANSFER EQUIPMENT
MARLO COIL COMPANY
SAINT LOUIS, MISSOURI

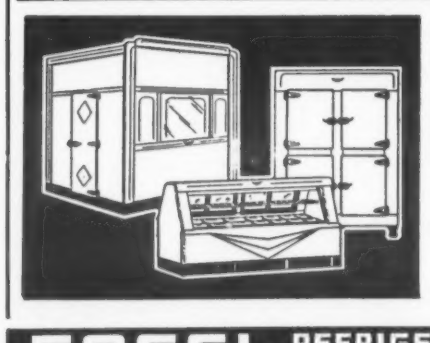
BUNDY TUBING
ENGINEERED TO YOUR EXPECTATIONS
BUNDY TUBING CO., DETROIT

AMANA Commercial REFRIGERATION
Modern Display Cases
Coolers, Refrigerators
AMANA SOCIETY, AMANA, IOWA

PURO ELECTRIC WATER COOLERS
BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.
PURO FILTER CORP. OF AMERICA
DRINKING WATER SPECIALISTS FOR 40 YEARS


TYPE 895
Henry "Y" Strainer
Exceptional design. Hot tin dipped welded steel construction with copper end connections (steel in F.P.T. sizes). Negligible pressure drop. Large screen area with easily removable screen. Light weight. Oil trapping prevented by installing on side or in vertical position.
ASK YOUR JOBBER FOR IT
Henry Valve Co.
1001-19 N. SPAULDING AVE.
CHICAGO


Patented CROSS-FIN COILS—
Bare Tube Coils—
Humi-Temp Forced Convection Units—
Zinc Fused Steel Plate Coils—
Disseminator Pans—
Refrigeration Products
Heat Exchangers—
Evaporative Condensers—
Instantaneous Water Coolers—
Air Conditioning Coils—
Industrial Units
LARKIN COILS, INC. 519 MEMORIAL DR., S. E., ATLANTA, GA.


READY TO GO!
OUR POST-WAR PLANS SPELL OPPORTUNITY FOR YOU.
DON'T DELAY --- CONTACT US NOW
REACH-INS, WALK-INS, AND OTHER ITEMS NOW AVAILABLE
INQUIRE ABOUT OUR PROPOSITION TO DISTRIBUTORS and FACTORY REPRESENTATIVES
FOGEL REFRIGERATOR COMPANY • Since 1899
5400 Eadom St., Philadelphia 37, Pa.

Are You Getting Your Share of the Milk-Cooling Business?
WILSON
SYSTEMS OF MILK COOLING
A TYPE FOR EVERY REQUIREMENT
1. ZEROFLOW MILK COOLER
The Wilson ZERO-FLOW Milk Cooler, in sizes to cool from 4 cans to 20 cans of milk daily, has set a high standard of milk-cooling speed, with economy and dependability throughout a long life. The 1944 ZERO-FLOW, engineered particularly for the use of refrigerating plates, continues the Wilson tradition of high performance in:
● RAPID AND UNIFORM COOLING
● MAXIMUM COOLING EFFICIENCY
● LOW COST OF OPERATION
● LIFE-TESTED CONSTRUCTION
If there is no Wilson Dealer near you . . . if you have an adequate sales-and-service organization . . . you can get your share of this tremendous business. Write NOW!
WILSON CABINET COMPANY
COMMERCIAL REFRIGERATION
SMYRNA DELAWARE
ZERO MILK FLOW COOLER
Model ZF8-HX50 Packaged-Unit

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.

RATES for all other classifications $5.00 per insertion. Limit 50 words.

Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count.

PAYMENT in advance is required for advertising in this column.

EQUIPMENT FOR SALE

COMPRESSORS—60—¼ H.P. Tecumseh, Chieftain Compressors. Price $59 each in lots of 10 or more. Wire, phone, or write Sales Department, OCHILTREE ELECTRIC CO., 21 Penn Ave., Pittsburgh 22, Pa. AT 1900.

FOR SALE: Trane Heating Coil for either Steam or Hot Water, approximately 350,000 Btu. capacity. Outside dimensions 46½ in. long, 28½ in. high, and 6 in. thick. Copper tubes and aluminum fins, prewar material. Used only a short while. AIR CONDITIONING PRODUCTS CO., 646 Broadway, Gary, Ind.

HUSSMANN 68. cubic foot porcelain reach-in refrigerators. Brand new. Other sizes available. General Electric self-contained milk coolers 4 and 6 can capacity. All sizes blower diffusers and condensing units. 13 and 20 cubic ft. freezer cabinets. Phone Rittenhouse 6359 or write. JORDON REFRIGERATOR CO., 235 N. Broad St., Philadelphia 7, Pa.

OFFERING: Quantity of used Frigidaire Model K ½ hp. condensing units. All checked and in running condition, no motors, $18.00. Also Brand New Fedders ice making coils, 4 to 16 tray. MANN, 595 Sixth Ave., N.Y.C.

FROSTED FOOD cabinets. 35 cubic foot capacity. Four-door reach-in type. All steel. Heavy low-temperature insulation. Rustproof steel interior. Baked sprayed white exterior. Equipped with chilling shelves. $490.00 net, including self-contained ½ H.P. Universal compressor, ready to plug in. GENERAL REFRIGERATOR CO., 5400 Eadom St., Philadelphia, Pa.

REACH-IN REFRIGERATORS. 35 cubic foot capacity. Four doors. All steel construction. Glass-wool insulation. Porcelain interior. Baked sprayed white exterior. Sturdy grid-type steel shelves. Diffuser type coil. $410.00 net, including self-contained ½ H.P. Universal compressor, ready to plug in. GENERAL REFRIGERATOR CO., 5400 Eadom St., Philadelphia, Pa.

ICE REFRIGERATED bottle coolers. Three-case capacity. Streamlined. All steel, heavily insulated. Casters. Also, for cooling fish, storing cracked ice, etc. Suitable for homes. $19.00 net, F.O.B. Philadelphia. New. No Priority. Streamlined. 100 bottle capacity size, $36.50 net. Convertible for mechanical operation. GENERAL REFRIGERATOR COMPANY, 5400 Eadom Street, Philadelphia 37, Pa.

FOR SALE: Milk Coolers, Bottle Coolers, converted Freezers. 1,000 complete High-Sides Frigidaire, Kelvinator ¼ H.P. to 2 H.P. Motors up to 5 H.P. send for list and price. EDISON COOLING CORPORATION, 310 E. 149th St., New York, N51, New York.

AMMONIA COMPRESSOR 6 x 6 with 15 H.P., 220 V., 3 ph., motor, ammonia receiver, direct expansion coil, control equipment, and valves. O. T. WOOD, 395 High Steet, Clinton, Mass.

FOR SALE—One Baker 12-ton Serial No. 4855 Vertical Ammonia Compressor with 25 H.P. Variable Speed Motor, Starter, and Controller, 870 R.P.M. full speed. No condenser coils or receiver. Box 1625, Air Conditioning & Refrigeration News.

POSITIONS WANTED

ATTENTION APPLIANCE manufacturers. I am interested in making a direct sales connection on commission basis only for Ohio territory. Your investigation as to personal qualifications is invited. Will welcome an interview at your convenience. Box 1624, Air Conditioning & Refrigeration News.

SALES ENGINEER and service supervisor with 15 years practical experience in the refrigeration and air conditioning industry desires to go into business in the Philadelphia area. If you need a dealer in this territory kindly forward full information to Box 1619, Air Conditioning & Refrigeration News.

FRANCHISES AVAILABLE

METAL MANUFACTURER wanted. Located in New York or New England States. To produce 10,000 farm freezers, immediately after materials are available. Must have modern steel fabricating and welding equipment, adequately financed. Exclusive and practical designs by recognized pioneering authority with large following. Highest references, address Box 1623, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

LEADING JOBBERS South Africa, established connection, want to contact manufacturers and/or representatives all types refrigeration and air conditioning accessories including Fractional Horse Power Electric Motors and components with view to representing them and marketing their products, Southern Africa. Box 1599, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION SERVICE MAN for commercial refrigeration and sales in expanding organization. Starting rate $1.10 per hour plus commission and car allowance, expense account. Give full details about yourself and experience first letter. Box 1620, Air Conditioning & Refrigeration News.

REFRIGERATION SERVICE Manager with household and commercial, radio and household appliance repair experience. Permanent position, old established firm. Choice year-around climatic conditions, good hunting and fishing country. Salary floor liberal—you set your own ceiling. Must be temperate, have USES referal card. Moving expense will be adjusted. Write P. O. Drawer 581, Fort Morgan, Colo.

REFRIGERATION ENGINEER to work with an old reliable company in the development of farm and home freezers. Excellent opportunity for right man. Must have sound ideas and intiative. Outline education, experience in first letter and indicate salary expected. Box 488, Ithaca, New York.

SHOP SUPERINTENDENT. Must have ability to train and handle men. Thorough knowledge of compressor rebuilding, motor repair, and general shop practice required. Permanent position, well established organization. Salary $325 per month. Box 1618, Air Conditioning & Refrigeration News.

MECHANICAL ENGINEER experienced in the design of refrigerating compressors and auxiliary equipment by a large Mid-West manufacturer. Reply confidential. Position permanent with excellent opportunity. Box 1622, Air Conditioning & Refrigeration News.

A NATIONALLY known electric appliance concern will soon need a vacuum cleaner, laundry equipment, water heater, and range supervisor, and home economist, to handle business through distributors in Michigan, Ohio, Kentucky area. Outline education, experience, present location and work, give age and salary expected in letter. Box 1621, Air Conditioning & Refrigeration News.

QUALIFIED REFRIGERATION engineer in research, design, development, production bottle coolers, bottle dispensers, soda fountains, beer dispensers, home appliances, etc. Capable supervising development, production as Product Engineer. Large, well-established organization, experienced refrigeration field, starting postwar developments immediately. Submit complete qualifications in writing. Interview will be arranged. Box 1625, Air Conditioning & Refrigeration News.

ESTABLISHED FRIGIDAIRE dealer organizations in Colorado need for immediate and post war activities, appliance sales manager, combination commercial sales and service manager, appliance servicemen, commercial refrigeration servicemen. Applications should contain complete information. FRIGIDAIRE DIVISION OF GENERAL MOTORS CORP., Denver Branch, 1920 Market St., Denver, 2, Colo.

ENGINEER, experienced in refrigeration compressors and/or cabinets to expand old established business now on war work. When applying give full details as to education, experience, family, salary required. Apply Box 1615, Air Conditioning & Refrigeration News.

ENGINEER WANTED: Large Ohio school teaching refrigeration and air conditioning by correspondence supplemented by shop training desires man with suitable engineering degree, who can teach resident students, supervise correspondence instruction and assume full charge of laboratory. Please give details of education and experience. Box 1610, Air Conditioning & Refrigeration News.

EXPERIENCED ENGINEER and designer thoroughly familiar with commercial refrigeration for old established manufacturer soda fountains, ice cream cabinets, food refrigerating equipment. Must be capable, assuming responsibilities in development, designing, redesigning our equipment. Position offers unusual opportunity for experienced, imaginative, inventive man. State full particulars. Box 1612, Air Conditioning & Refrigeration News.

BEST OPPORTUNITY in all America both during and after the war. San Diego, Calif. Offers you everything worth living for. We need good service men. Will pay top wages, time and a half and double time for over 44 hours plus liberal commissions, WRIGHT REFRIGERATION SERVICE, 1337 India St., San Diego 1, Calif.

WANTED: Executive with production experience and refrigeration engineering training with permanent position in an established manufacturing company. Please state full particulars, experience, and references. Confidential. Box 1626, Air Conditioning & Refrigeration News.

Wanted

REFRIGERATION COMPRESSOR

Will buy manufacturing rights on domestic refrigeration compressor of proven design. Will also consider purchase of company established in the refrigeration industry. Phone or wire L. A. Kent, Wilson Foundry & Machine Co., Pontiac, Mich. Phone Pontiac 8111.

Peace to Bring Fight For World Markets

U.S. Business and Gov't Join In Promotion

NEW YORK CITY—Germany may lose the war militarily, but the fight for economic domination in markets all over the world will continue wherever Germany has established distribution channels, the recognition of German trademarks, and consumer acceptance of German goods.

The necessity for maintaining American trademarks and American goodwill in these competitive markets through active advertising now is presented in "American Advertising Today in Sweden, Spain, Portugal, Turkey, and Egypt," a 50-page booklet issued by the Special Promotion Division of the overseas branch of the Office of War Information.

ERROR OF FIRST WAR

The majority of American manufacturers discontinued export advertising during World War I, the booklet recalls, and the valuable foreign markets which we lost contact with as a result were regained only after long, uphill fighting against established competition.

Today American manufacturers, backed by the facilities and organization of United States Governmental agencies operating abroad, are using the powerful economic weapons which our export industries are in a position to administer.

The Special Promotion Division of OWI was set up in 1943 to make available to American manufacturers a service that would permit continuation of their advertising in export markets. At least 24 major companies have used it, and with impressive results.

U. S. ADVERTISING BEST

American advertising far surpasses those of Germany in these markets, letters from the companies have reported, in spite of augmented German promotional work. "The definite impression that America is interested financially in postwar Europe," says a report from Istanbul, Turkey, "forms a theme which unquestionably helps to keep our views before the public."

The coming of war made physical transportation of advertising campaign material by normal methods always delayed and frequently impossible. Moreover, American advertising data on media, circulation, rates, and market conditions were made obsolete at a time when access to new information also was cut short.

This vital information is now supplied by the Special Promotion Division of OWI. Publication changes, shifts in rates, circulation, and mechanical requirements are noted.

WATCH FOREIGN AGENCIES

Dossiers are kept also on the political and financial standing of the various associate advertising agencies abroad, and of their effectiveness as advertising media in the fields they cover.

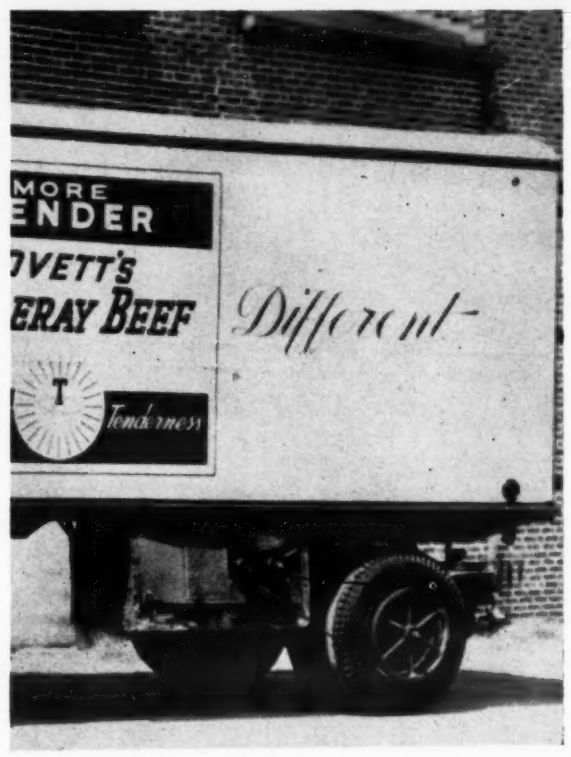
The Division's service includes such physical offices as transmission of campaign material to points abroad, handling of correspondence, obtaining and forwarding of tear sheets and invoices, checking of insertion dates, campaign starting dates, and the like.

Transmission is effected with official dispatch through Army services, by governmet cable, or by diplomatic air or sea pouch. A substantial saving of weeks is gained here.

All of this is done without cost to the advertiser or to the agency representing him. The Division itself is in no sense an advertising agency, entering into no contracts and assuming no obligations except those of assistance, but these it gives with the solidity and backing of this country's official representatives abroad.

The booklet includes an index of approved publications in the five countries discussed, with circulation figures (contrasted with population figures), costs of specific sizes of insertions, national literacy percentages, and estimated percentages of literate families covered by the publications.

Trailer Refrigeration Unit Powered By Belt Drive off Rear Wheel



Compressor for this new refrigerated Fruehauf trailer is driven off the rear wheel by a v-belt arrangement. The trailer is employed by the Winn-Lovett Grocery Co. of Jacksonville, Fla., for transportation of "Tenderay" beef from the storage plant to local stores in Jacksonville and outlying towns. It is insulated with Reynolds metallization.

New Jersey A.S.R.E. to Get Its Charter Oct. 19

NEWARK, N. J.—Charter for the newly formed Northern New Jersey Section of American Society of Refrigerating Engineers will be presented to the group by J. Stone, A.S.R.E. national vice president, at a meeting to be held Oct. 19 at the Robert Treat Hotel.

Baltimore Dept. Store Plans Strong Appliance Drive

BALTIMORE, Md. — Aggressive selling of all types of major appliances, including reconditioned trade-ins, is planned by Stewart & Co., department store here, announces Lewis P. Seiler, vice president in charge of home furnishings.

GUARD AGAINST MOISTURE WITH



ANSUL

ICE-X

TRADE MARK REG. U.S. PAT. OFF.

ICE-X quickly cures emergency freeze ups when ice forms at the expansion valve or capillary tube. Harmless to use. Great for Freon, Carrene, or Methyl Chloride systems . . . The dependable liquid anti-freeze.

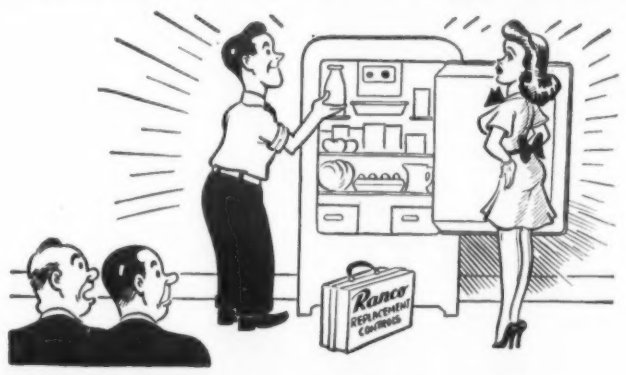


ORDER FROM YOUR JOBBER OR—

EXCLUSIVE NATIONAL DISTRIBUTOR

THE HARRY ALTER CO. 1728 S. MICHIGAN AVE. CHICAGO 16, ILLINOIS

JOBBERS: WRITE FOR SPECIAL PROPOSITION!



Depend On Your Ranco Jobber

For all types of Pressure and Temperature Controls—commercial and domestic—depend on the advice of your Ranco jobber. He has the exact control you need, or can recommend a simple adaptation.

"CLASSY CHASSIS"

THE RANCO CONTROL, he means, with its good-looking construction of stainless steel base, top-frame, side-cover. Sturdy, too, for when sub-assemblies are mounted, base and top-frame are spot-welded to form one solid unit.

But interior construction counts for a lot, too, if the control is to give long-time, dependable service. In all Ranco Controls the mounting lugs, plates and studs are *welded* into place. The Overload Protection Unit's heater coil is *imbedded* in ceramic material, *anchored* in exact position in solder well—no "positioning" ever has to be done by the service man. *Precision machining* of the overload latch prevents any binding.

Yes, every Ranco Control is a "classy" job. And this same quality is *built-in* with the best materials obtainable, accurately fabricated, carefully assembled and tested. You can install Ranco Controls with complete confidence that their good appearance will be matched by their dependable performance.

Ranco Inc. COLUMBUS 1, OHIO

Heads 'Monitor' Co



T. K. QUINN

* * *

New Firm Is Set Up To Sell Appliances

(Concluded from Page 1, Column 2)

manufacturers is being made at this time, but it is understood that distributors of the class and type of Rex Cole, Inc., New York, P. H. Harrison Co. of Newark, and S. S. Fretz, Inc. of Philadelphia may be included.

The announcement of the formation of the company declared that its aim will be to develop better and lower cost methods in appliance distribution. "The way to do this is to concentrate on the merchandising functions, applying the same principles of division of labor, correlation, and mass action which have been so successfully realized in production," the announcement declared.

"Through the 'Monitor' organization," said the announcement, "small and medium-sized manufacturers will be able to compete successfully in the national market without setting up prohibitively expensive sales organizations of their own.

"The company will not operate on the conventional 30-day cancellation distributor contracts," it was stated. "Once a member company is accepted it can only be cancelled for cause by democratic vote of the other associated companies. Each distributor has his own independent business and a proportionate ownership in the headquarters company. It is planned eventually to extend this same kind of interest to independent retailers."

One feature of the new company, according to the announcement, will be a department devoted to aiding returned service men in establishing independent dealer business.

T. K. Quinn, who heads the Monitor Equipment Corp. as chairman, is president of the T. K. Quinn Co., Inc., of New York. He is at present on leave, serving part time now as the dollar-a-year Director General of the War Production Drive, Washington, D. C., an agency which he has recommended be discontinued when the European War is ended.

Mr. Quinn was at one time vice president of General Electric Co. and was one of the men who put General Electric into the electric refrigerator business. Just prior to the war he was president, for seven years, of Maxon, Inc., advertising agency.

Gorman Chicago Chief For Wood Conversion

ST. PAUL — R. E. Backstrom, industrial sales manager of the Wood Conversion Co., recently announced the appointment of H. A. Gorman as Chicago district manager. This appointment is in line with an expansion resulting from new products and additional production capacities of various types of insulation and felt.

Harry Gorman has been transferred to the industrial department from a sales supervisory position in the retail lumber dealer division, and has a background of almost ten years of experience in selling Balsam-Wool and Nu-Wood in the construction field.

Among the new products which this department will offer to the trade are several new types of blanket and bat insulation, special insulating fibres for refrigerators and freezers, a patented insulating fibre for lockers and cold storage plants.

'Freon-12' Restrictions Will Be Continued As Shortage of Chemicals Cuts Production

(Concluded from Page 1, Column 5)

ated under one or more of the following conditions:

(i) Where an air-cooled condenser is used, and the ambient temperature is 110° F. or higher; or

(ii) Where the saturated refrigerant temperature corresponding to the suction pressure is less than minus 10° F.; or

(iii) Where aluminum or magnesium alloys or rubber (except synthetic rubber) have been used in construction of the system and come in contact with the refrigerant, and are not easily replaceable; or

(iv) Where the system is for use aboard ship, or outside of the continental United States by the Army, Navy, Maritime Commission or War Shipping Administration; or

(v) Where the total operating charge required to operate the system is ten (10) pounds or less of "F-12" gas and the system was in operation on Nov. 12, 1943, and is used for food preservation or for storage of penicillin, blood serum, blood for plasma, blood plasma, biologicals and bacteriologicals; or

(vi) Where the use of no Group 2 or Group 3 refrigerants, as defined in the American Standard Safety Code for Mechanical Refrigeration, ASRE Circular No. 15, ASA-B-9-1939, as approved by the American Standards Association April 20, 1939, is permitted by that Code; or

(vii) Where the system is used in a sealed railroad car or sealed bus.

(The above restrictions apply not only to systems used for ordinary civilian purposes, but also to those owned, operated, or used within the continental United States by the Army, Navy, Maritime Commission or War Shipping Administration, including post exchanges and ships service stores, other than those used aboard ships.)

(3) Attention is called to paragraph (c) (2), which prohibits a supplier from delivering "F-12" gas except on certified orders.

Hertzler Heads Sales Of G-E Laundry Line

BRIDGEPORT, Conn. — Lloyd G. Hertzler has been appointed sales manager of General Electric's home laundry equipment division.

Mr. Hertzler's promotion to his new position follows an extensive selling and sales promotion career with G-E. From 1939 until the war curtailed the production of peacetime appliances he was sales manager of the vacuum cleaner division.

Store Names Murphy

BUFFALO — Eugene F. Murphy has taken over buying of appliances for the Buffalo, Rochester, and Syracuse stores of E. W. Edwards & Son, announces William N. Wildridge, general manager of the Buffalo store.

